Pipetting 360°

RAININ

2008

Manual Pipettes
Electronic Pipettes
Multichannel Pipettes
Specialty Products
BioClean Tips
Accessories
Service Programs

Pipettes, Tips and Service

Top products for top performance

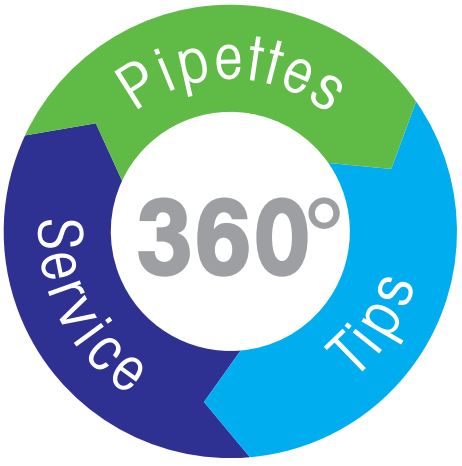
a METTLER TOLEDO Company

Pipetting 360°
Top Pipetting Performance

In today's scientific world with strict regulations, pressures on time-to-market, and stringent quality requirements, no one can afford unreliable and inconsistent pipetting results.

Perfect pipetting, however, cannot just be achieved by having a good pipette. Pipettes are a central element of your work, which requires very precise and accurate pipettes, high-quality tips, the proper maintenance and calibration, and the right user technique. All these elements need to work together smoothly to avoid possible problems.

This is why we have created "Pipetting 360°", the world's only integrated approach on pipetting. As the leading manufacturer of high-quality pipettes and tips, and with a world-class service-organization, we are the only provider which can offer you a full pipetting solution to ensure optimal pipette performance. Fast, easy and hassle-free – so that you can focus on the real challenges of your work.



HandFriendly Pipettes
RAININ pipettes enhance lab performance and help reduce time-to-market by guaranteeing highest accuracy and repeatability. Innovative ergonomic designs, including the patented LTS LiteTouch System, minimize fatigue and injuries, hence reducing operator errors and inaccuracies.

PerfectPerformance Services
RAININ services assure consistent instrument reliability and support quality control processes, thereby maximizing user confidence. RAININ's calibration and maintenance services rely on METTLER TOLEDO's high-precision balances and expertise. Additionally, the training and support offering assures optimal operator handling and precision.

BioClean Tips
RAININ high-grade bioclean tips ensure top pipetting performance through innovative design and high quality production. Manufactured under clean-room conditions, these flawless tips are 100% contamination-free, preventing experiment inconsistencies and failures. With a wide array of tips, available in a variety of feature-sets, volume ranges and packaging options, to select from, scientists can always work with the optimal application-specific pipetting system.

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www.mt.com/rainin

Pipetting 360° –
This is What You Can Expect

Worry-free Pipetting for Top Performance

Every measurement involves risks which can compromise results and impair the quality of your final product. Pipetting 360° ensures the constant quality of your processes.

Knowledge Increases Competence

Your process requirements are at the heart of our solutions. Professional training from RAININ increases your measuring accuracy and guarantees that both the user and the pipette are up to the task from the start. Which pipette and tips to choose, how often calibration is required and how to fulfill regulatory issues? Pipetting 360° gives you clear answers.

Tailored Service Programs for Your SOPs

Minimize your risks by knowing them. GxP standards require users of food-, drug-, medical- devices, and biological products to calibrate, clean, and maintain instruments (which also include pipettes) at suitable intervals.

Careful Selection Protects Your Investment

Selecting the right supplier of pipetting solutions can have a great impact on the quality of your end products. This can have a direct impact on your risk management.

Liability, Warranty
RAININ sells the products in this catalog for laboratory use only. They are not intended for household use or medical purposes. RAININ products are warranted free from defects in materials and workmanship for one year from date of purchase.

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Traditional Pipetting

is linked to tired hands and repetitive strain injuries

Pipetting is the most repetitive task in many laboratories

- Many researchers commonly pipette 2 to 4 hours a day

Pipetting is a high-force activity

- Traditional plunger forces may exceed 4 kg force
- Traditional tip ejection forces may exceed 4 kg force

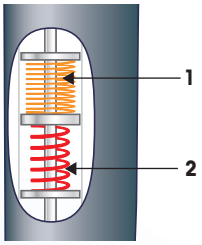
Many researchers suffer from tired hands, leading to:

- reduced pipetting accuracy
- decreased productivity
- repetitive strain injuries

What causes high plunger force?

Typical Traditional Plunger Force

4 kg



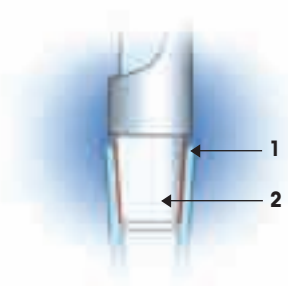
1 Aspiration spring
Lighter spring compresses first, allowing you to find and hold the first stop.

2 Blowout Spring
Stronger spring compresses next. High force required to dispense.

What causes high tip ejection force?

Typical Traditional Tip Ejection Force

4 kg



1 Large sealing area
with thick-walled tip creates high friction.

2 Conical shaft
fits into conical tip with no positive stop.

Recommended maximum force for men

3 kg

Recommended maximum force for women

2.1 kg

Forces should not exceed 30% of maximum thumb strength capacity: 3 kg for men, 2.1 kg for women

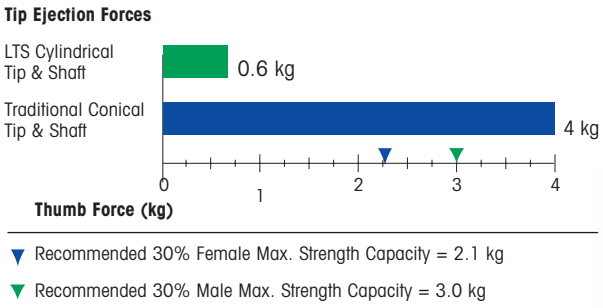
RAININ® offers pipettes and tips in 2 shaft designs

LTS® Cylindrical Shaft / Tip System

- **Cylindrical design reduces tip ejection force**
- **Low force means freedom from tired hands**
- **Tips seal reliably and consistently without excessive force**

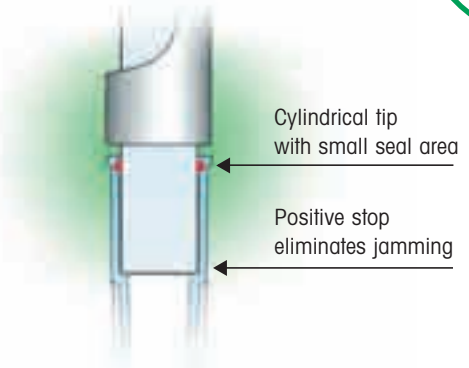
LTS reduces tip ejection forces by 85%
With traditional conical tip/shaft designs, tip ejection forces can be as high as 10 kg, with an average of 4 kg.

Tip ejection force is only 0.6 kg with LTS.



Consistent seal without excessive force
The LTS cylindrical design produces a reliable, consistent seal without excessive force. LTS tips are thin-walled and incorporate a small, well-defined seal area and a positive stop. The positive stop lets you know exactly when the seal is made - no need to "jam" or pound the shaft into the tip.

LTS cylindrical tip and shaft



For L-, FL-, RL-, E1, E3- models and all multichannel pipettes

E-Man™ Hybrid

Total Volume Control

- **Real-time pipetting™**
- **Highly accurate volume setting**
- **Instant readout saves time and effort**

New Product

E-Man Hybrid uses real-time sensing technology to continually update the plunger position and communicate it to the LCD display, producing highly accurate volume settings and enabling you to expand your application capabilities and optimize your pipetting performance.

Accurate
Four-digit
volume settings

Hand-friendly
Ergonomic design with
LTS LiteTouch-System

Manual pipette with advanced functionality

E-Man Hybrid brings together the advantages of manual and electronic pipettes in one great new product. For ultimate comfort and performance the E-Man Hybrid is the future of manual pipetting.

Optimize pipetting performance

E-Man Hybrid gives you access to features normally not available in manual pipettes, via the TRACK and TITRATE modes. These features improve your workflow and performance, and help save valuable samples. Some samples and reagents are expensive or in short supply. TRACK mode in E-Man Hybrid always shows the exact volume aspirated, eliminating guesswork and wasted sample.

Real-time Measurement
Continuous tracking of volume

Cycle Counter
Track your progress

Easy Maintenance
GMP/GLP-ready

Manual pipette with advanced functionality

PIPET Mode
In this mode E-Man Hybrid operates like a regular manual pipette.

TRACK Mode
In TRACK Mode, the display shows real-time volume of sample in the tip at all times, allowing you to accurately measure the volume of unknown samples – a first for a manual pipette!

TITRATE Mode
In TITRATE mode, the display shows the exact amount of liquid dispensed from the tip, enabling accurate titration experiments – another first for a manual pipette!

CC-Cycle Counter Mode
The easy-to-use Cycle Counter monitors the combination of an aspiration followed by dispense and blow-out steps to give you an updated record of completed pipetting cycles.

Reduced pipetting forces: no heavy springs
Magnetic assist, low spring forces and low-drag seals reduce plunger forces. A comparison of manual air-displacement pipettes reveals that approximately 50% of pipetting forces result from the plunger operation and the remaining 50% from tip ejection.

Ordering Information

E-Man Hybrid with LTS cylindrical shaft

Cat. No.	Volume Range
H-10	0.5 µl–10 µl
H-20	2–20 µl
H-100	10–100 µl
H-200	20–200 µl
H-300	20–300 µl
H-1000	100–1000 µl
H-2000	200–2000 µl

RAININ LTS tips must be used with LTS pipettes.

Pipet-Lite® with magnetic assist

Designed to prevent tired hands

- **Vastly reduced aspiration and blowout force**
- **Tip ejector with shock absorber to reduce thumb stress**

Magnetic assist – avoids heavy pipetting forces

A magnet assists the thumb to feel and hold the piston at the zero position. Magnetic assist reduces the need for a large differential between the aspiration and blow-out springs. Both springs are significantly lighter.

Consistent sample pickup

Magnetic assist improves accuracy and reproducibility. The magnet provides a positive feel at the zero position, ensuring that the proper amount of sample is aspirated every time.

Reduced pipetting forces: no heavy springs

Magnetic assist, low spring forces and low-drag seals reduce plunger forces. A comparison of manual air-displacement pipettes reveals that approximately 50% of pipetting forces result from the plunger operation and the remaining 50% from tip ejection.

Avoid heavy pipetting forces. Protect your hands with the best tools.

Lightweight, rugged body
Pipet-Lite is lightweight and made of high density, chemically resistant polymer. It won't crack or break, even if dropped.

Comfortable fingerhook
The fingerhook allows the operator to rest the hand and use a lighter grip during pipetting. Pipet-Lite can be held in a variety of positions.

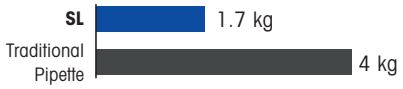
Digital volume adjustment
The snag-proof design allows rapid volume adjustment even when wearing gloves. Once the volume is set, a slight turn of the volume setting lock will prevent accidental volume changes.

Quick-release tip ejector
The tip ejector is easily removed by pressing lightly on the ejector tabs. The positive lock feature ensures the ejector stays securely in place. All volume ranges incorporate quick-release tip ejectors.

Quick release tip ejector

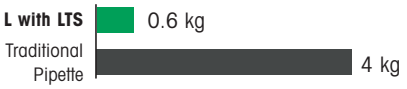
Available in both LTS cylindrical and traditional conical shaft/tip designs
Pipet-Lite gives you the flexibility to choose either LTS cylindrical or traditional conical shafts/tips to suit your pipetting needs.

Pipet-Lite force reduction without LTS...
Plunger forces reduced by 30%



Pipet-Lite (SL) with traditional conical shaft

Pipet-Lite force reduction with LTS ...
Tip ejection and plunger forces elimnated by 70%



Pipet-Lite with LTS cylindrical shaft

Ordering Information

Cat. No.	Volume Range
SL-2	0.1-2 µl
SL-10	0.5 µl–10 µl
SL-20	2 µl–20 µl
SL-100	10 µl–100 µl
SL-200	20 µl–200 µl
SL-300	20 µl–300 µl
SL-1000	100 µl–1000 µl
SL-2000	200 µl–2000 µl
SL-5000	500 µl–5000 µl
SL-10ML	1 ml–10 ml

Cat. No.	Volume Range
L-2	0.1 µl–2 µl
L-10	0.5 µl–10 µl
L-20	2 µl–20 µl
L-100	10 µl–100 µl
L-200	20 µl–200 µl
L-300	20 µl–300 µl
L-1000	100 µl–1000 µl
L-2000	200 µl–2000 µl
L-5000	500 µl–5000 µl
L-10ML	1 ml–10 ml
L-20ML	2 ml–20 ml

RAININ LTS tips must be used with LTS pipettes.

Pipet-Lite® Starter Kit

A great way to introduce hand-friendly pipettes to your lab

- **Save money!**
- **Great for start-up labs**
- **Get the three most popular Pipet-Lite models, tips and accessories in one handy package**

Pipet-Lite Starter Kit

Includes one each 20, 200 and 1000 µl adjustable Pipet-Lite pipette, 3 racks of tips, and 3 Hang-Ups to hold your pipettes safely, at a significant savings compared to buying individually.

3 Pipet-Lite pipettes with LTS:

L-20
L-200
L-1000

3 Hang-Ups (HU-M3)

3 Racks of RAININ LTS Tips:

RT-L10
RT-L250
RT-L1000

3 Pipet-Lite pipettes with traditional shafts:

SL-20
SL-200
SL-1000

3 Hang-Ups (HU-M3)

3 Racks of RAININ traditional Tips:

RT-200F
RT-250
RT-1000

Pipet-Lite® Fixed-Volume

Dedicated volumes for routine tests

- **Custom dedicated volumes**
- **Single- and multichannel pipettes**

Ideal for dispensing large number of samples or reagents with dedicated volumes for standardized work. Volumes cannot be changed accidentally, eliminating selection errors. Available in both single channel and multichannel models.

Pipet-Lite multichannel available in LTS only.

Ordering Information

Fixed-Volume, single channel with LTS cylindrical shaft

Cat. No.	Description	Volume
FL-2	Pipet-Lite Fixed Volume	2 µl
FL-5	Pipet-Lite Fixed Volume	5 µl
FL-10	Pipet-Lite Fixed Volume	10 µl
FL-20	Pipet-Lite Fixed Volume	20 µl
FL-25	Pipet-Lite Fixed Volume	25 µl
FL-50	Pipet-Lite Fixed Volume	50 µl
FL-100	Pipet-Lite Fixed Volume	100 µl
FL-200	Pipet-Lite Fixed Volume	200 µl
FL-250	Pipet-Lite Fixed Volume	250 µl
FL-400	Pipet-Lite Fixed Volume	400 µl
FL-500	Pipet-Lite Fixed Volume	500 µl
FL-1000	Pipet-Lite Fixed Volume	1000 µl
FL-2000	Pipet-Lite Fixed Volume	2000 µl
FL-5000	Pipet-Lite Fixed Volume	5000 µl
FL-10ML	Pipet-Lite Fixed Volume	10 ml
FL- VOL	Specify Desired Volume:	1 µl-2 ml

Fixed-Volume, single channel traditional conical shaft

Cat. No.	Description	Volume
FSL-2	Pipet-Lite Fixed Volume	2 µl
FSL-5	Pipet-Lite Fixed Volume	5 µl
FSL-10	Pipet-Lite Fixed Volume	10 µl
FSL-20	Pipet-Lite Fixed Volume	20 µl
FSL-50	Pipet-Lite Fixed Volume	50 µl
FSL-100	Pipet-Lite Fixed Volume	100 µl
FSL-200	Pipet-Lite Fixed Volume	200 µl
FSL-250	Pipet-Lite Fixed Volume	250 µl
FSL-400	Pipet-Lite Fixed Volume	400 µl
FSL-500	Pipet-Lite Fixed Volume	500 µl
FSL-1000	Pipet-Lite Fixed Volume	1000 µl
FSL-2000	Pipet-Lite Fixed Volume	2000 µl
FSL-5000	Pipet-Lite Fixed Volume	5000 µl
FSL-10ML	Pipet-Lite Fixed Volume	10 ml
FSL- VOL	Specify Desired Volume:	1 µl-2 ml

Fixed-Volume, multichannel with LTS

Cat. No.	Description	Volume
8-CHANNEL		
FL8-10	Pipet-Lite Fixed Vol	10 µl
FL8-20	Pipet-Lite Fixed Vol	20 µl
FL8-200	Pipet-Lite Fixed Vol	200 µl
FL8-300	Pipet-Lite Fixed Vol	300 µl
FL8-1200	Pipet-Lite Fixed Vol	1200 µl
FL8- µl VOL	Specify Vol :	0.5 -10 µl
FL8- µl VOL	Specify Vol:	10.1-300 µl
FL8- µl VOL	Specify Vol:	301-1200 µl
12-CHANNEL		
FL12-10	Pipet-Lite Fixed Vol	10 µl
FL12-20	Pipet-Lite Fixed Vol	20 µl
FL12-200	Pipet-Lite Fixed Vol	200 µl
FL12-300	Pipet-Lite Fixed Vol	300 µl
FL12- µl VOL	Specify Vol:	0.5 -10 µl

Custom volumes available; please specify desired volume.
RAININ LTS tips must be used with LTS pipettes.

RAININ Classic™

Improved features – uses conical tips

- **Lower aspiration and blowout spring forces, low-drag seals**
- **Ergonomic handle with fingerhook**
- **Reduce repetitive strain and injury**

Modern, hand-friendly ergonomic design

RAININ Classic reduces the risk of repetitive strain injury: our engineers developed this pipette with lighter aspiration and blowout springs, and a low-drag seal. Less thumb force is needed, resulting in reduced fatigue, less pain and less risk of injury.

The ergonomic handle and finger-hook mean you don't have to grip: you can hold RAININ Classic loosely while pipetting and relax completely between pipetting cycles, preventing fatigue.

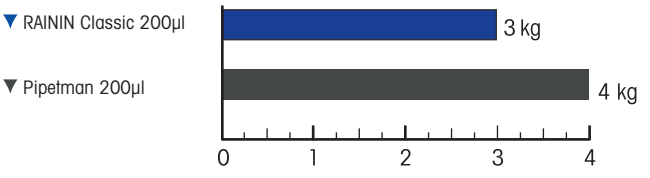
Also the silicone shock absorber in the tip ejector takes the impact out of tip ejection.

Durability and ruggedness

Like all RAININ pipettes, RAININ Classic is built to give years of solid performance. Its rugged construction is evident when you first pick it up:

it feels good in your hand – you know you are holding a thorough-bred.

Pipette plunger force comparison



RAININ Classic reduces plunger force by 25% compared to Pipetman®.

An ergonomic evolution!

RAININ Classic™ – the Next Generation

Improved ergonomic benefits

Lighter aspiration and blowout springs
Reduce pain and injury. Plunger force in RAININ Classic is 25% less than Pipetman.

Ergonomic handle with fingerhook
Reduce grip force and fatigue. You can use a lighter grip and rest your hand between pipetting cycles.

Silicone shock absorber in tip ejector
Provides extra protection for your thumb when ejecting tips by reducing thumb impact.

Quick-release tip ejector
Remove by pressing lightly on the ejector tabs. No strain or tugging at the ejector arm! The positive lock keeps the tip ejector firmly in place.

25% Force Reduction

RAININ Classic force reduction without LTS...
Plunger forces reduced by 25%

Ordering Information

Cat. No.	Volume Range
PR-2	0.1 µl-2 µl
PR-10	0.5 µl–10 µl
PR-20	2 µl–20 µl
PR-100	10 µl–100 µl
PR-200	20 µl–200 µl
PR-1000	100 µl–1000 µl
PR-5000	500 µl–5000 µl
PR-10ML	1000 µl–10 ml
PR-START	Starter Kit

RAININ Classic pipettes use traditional conical tips.

RAININ Classic™ Starter Kit

Get the 3 most popular pipette models, Hang-Ups, and tips and SAVE!

The Starter Kit contains:

- **3 RAININ Classic Pipettes:**
  PR-20, PR-200, PR-1000
- **2 Racks of Traditional Conical Tips**
  RT-250, RT-1000
- **3 Hang-Ups (HU-M3)**

PR-Start

Upgrade your lab to the next generation of classic-style pipettes!

Accessories for Manual Pipettes

Hang-Ups™

Holds RAININ pipettes, Pipetman, Ultra, Microman and Distriman safely. Available in two styles:

HU-M3
Individual Hang-Ups with magnets. Adhesive disks included for mounting to non-ferrous surfaces.
3/pkg.

HU-S3
Shelf Hang-Ups without magnets.
Mounts to lab shelf with clamp and adjustable screws.
3/bracket.

Stands for Pipettes

RAININ Carousel Stand
CR-7
Holds 7 Pipet-Lite, Pipet-Plus, Pipetman, Ultra, Microman, Distriman.
Will hold EDP3 pipettes when used with Adapter (HU-A3, page 29).
Rotates for easy access. Sturdy base won't tip over.

Pipette Rack
GR-3
Holds 3 RAININ pipettes with fingerhook, also Pipetman

EDP® 3 Electronic Pipette

- **Automatic linearity correction technology**
- **Unmatched accuracy and precision**
- **Reduces the risk of repetitive strain injuries**

Consistent accuracy, user-to-user, sample-to-sample
The micro-computer in EDP3 pipettes increases accuracy and precision by making piston movements operator-independent. The piston moves the correct distance, at the correct speed, independent of user variation.

Simple one-hand operation
Designed for thumb operation, EDP3 is easy to use with either hand, even with gloves. The intuitive software allows simple operation without studying a complicated user manual.

Self-calibrating
EDP3 pipettes self-calibrate by resetting the zero piston position at the end of each dispensing sequence. Self-calibration prevents measurement errors.

Automatic linearity correction
EDP3 automatically compensates for errors associated with the physics of moving liquids. Using a patented correction factor at every volume setting, EDP3 exhibits a truly linear response over the entire volume range of the pipette.

3000 cycles on one charge
Rechargeable Li-Ion battery provides over 3000 cycles on one-hour charge; over 500 cycles after only 10-12 minutes. An indicator displays battery power level.

Power requirements
A Wall Power Supply or Rapid Charge Stand is required to charge the EDP3 battery.

Wall Power Supply
Completely recharges EDP3 in about an hour. Allows operation while recharging, or directly without a battery.

Rapid Charge Stand
Stores up to three EDP3 pipettes and recharges them sequentially. Can be mounted on a wall. Supplied with one Wall Power Supply (E3-WPS).

Ordering Information

Cat. No.	Description
E3-WPS	Wall Power Supply
E3-RCS	Rapid Charge Stand

Easy-to-read display

Continually shows mode, status, volume and battery level

Mode key

Selects modes and options

Reset key

Returns piston to zero position and dispenses remaining sample

Dual-actuator triggers

Left- or right-hand operation

Up/down arrows

Adjust volume, set speed and options

Pipet	Arrows select volume, triggers aspirate and dispense.
Multidispense	Automatically calculates (or you can select) the number of aliquots to dispense for the total volume aspirated.
Dilute	Diluent, an air gap, and sample are aspirated separately by a fixed air gap, and dispensed together.
Titrate	Partially dispenses under trigger control to desired endpoint. Total volume shown on display.
Manual	Measures unknown volumes; allows manual operation.
GLP	Supplies operator log (cycles, date, technician ID).
Speed	Up to 10 settings for each mode.
Mix	Mixes by repeated movement of liquid in and out of the tip.
Volume Sequencing	Aspirate and/or dispense up to 16 preset volumes in pipet, multidispense, and dilute mode.
Cycle Counter	Displays number of samples dispensed, up to 999
Sound	Tone signals when ready to aspirate and when sample is fully dispensed. On/off and volume control.
Fixed Pipetting	Aspirate and dispense up to 6 preset volumes.

Available in both LTS cylindrical and traditional conical shaft/tip designs

EDP3 gives you the flexibility to choose either LTS cylindrical or traditional conical shafts/tips to suit your pipetting needs.

50% Force Reduction

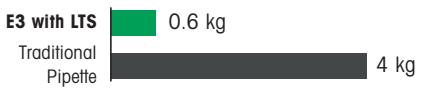
EDP3 force reduction without LTS...

Plunger forces reduced by 100% in all EDP3 models

95% Force Reduction

EDP3 force reduction with LTS...

No plunger forces and dramatically reduced tip ejection forces



Ordering Information

Complete EDP3 pipettes include a long-life, rechargeable Li-Ion battery. Either a Rapid Charge Stand or Wall Power Supply MUST be purchased to charge the battery.

EDP3-Plus traditional shaft

Cat. No.	Volume Range
SE3-10	0.5-10 µl
SE3-20	2–20 µl
SE3-100	10–100 µl
SE3-200	20–200 µl
SE3-300	20–300 µl
SE3-1000	100-1000 µl
SE3-2000	200-2000 µl
SE3-5000	500-5000 µl
SE3-10ML	1000 µl–10 ml

EDP3-Plus with LTS shaft

Cat. No.	Volume Range
E3-10	0.5–10 µl
E3-20	2–20 µl
E3-100	10–100 µl
E3-200	20–200 µl
E3-300	20–300 µl
E3-1000	100-1000 µl
E3-2000	200-2000 µl
E3-5000	500-5000 µl
E3-10ML	1000 µl–10 ml
E3-20ML	2000 µl–20 ml

RAININ LTS tips must be used with LTS pipettes.

EDP® 1 Electronic Pipette

Ergonomic handle with finger trigger actuation

- **Fully numeric keyboard for rapid settings**
- **More powerful stepper motor**
- **Reduces risk of repetitive strain injuries**

Consistent accuracy, user-to-user, sample-to-sample
The EDP1 electronic pipettes increases accuracy and precision by making piston movements operator-independent. The piston moves the correct distance, at the correct speed, totally independent of user variation.

Simple one-hand operation
Designed for thumb operation, EDP3 is easy to use with either hand, even with gloves. The intuitive software allows simple operation without studying a complicated user manual.

Self-calibrating
EDP1 pipettes self-calibrate by resetting the zero piston position at the end of each dispensing sequence. Self-calibration prevents measurement errors.

Trigger eliminates plunger force
Pipetting is actuated by pressing the trigger with the index finger.

Fully numeric, easy-to-use keyboard
Set volumes instantaneously – no scrolling!

Cordless operation, low power consumption
Power is supplied to EDP1 by a wall power supply or a NiMH rechargeable battery pack. With the battery pack installed, EDP1 will provide up to 1000 full-stroke pipetting cycles, more if using smaller volumes.

Rapid Charge Stand
A wall power supply and a battery pack are included with the purchase of a complete EDP1 Pipette.

Convenient stand recharges the EDP1 Battery Pack in just 90 minutes, compared to 12-14 hours when using the Wall Power Supply attached to the pipette.

Ordering Information

Cat. No.	Description
6101-049	Rapid Charge Stand

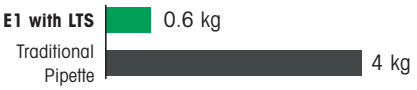
EDP1 Modes

Pipet: transfers individual liquid samples
Multidispense: transfers equal, multiple aliquots from a single volume
Titrate: partially dispenses under trigger control to desired endpoint
Dilute: picks up diluent, air, and sample separately and dispenses them together
Mix: mixes by repeated movement of liquid in and out of the tip
Volume Sequencing: picks up and dispenses up to 12 stored volumes
Measure: determines the volume of aspirated sample

Available in both LTS cylindrical and traditional conical shaft/tip designs
EDP1 gives you the flexibility to choose either LTS cylindrical or traditional conical shafts/tips to suit your pipetting needs.

EDP1 force reduction without LTS...
Plunger forces reduced by 100%

EDP1 force reduction with LTS...
No plunger forces and dramatically reduced tip ejection forces



Ordering Information

Complete EDP1 pipettes include control module, battery pack, wall power supply, and one liquid end. The Rapid Charge Stand (6101-049) must be purchased separately

EDP1 traditional shaft

Cat. No.	Volume Range
SE1-10	0–10 µl
SE1-20	2–20 µl
SE1-100	10–100 µl
SE1-200	20–200 µl
SE1-300	20–300 µl
SE1-1000	100–1000 µl
SE1-2000	200–2000 µl
SE1-5000	500–5000 µl
SE1-10ML	1000 µl–10 ml

EDP1 pipettes with conical shafts use RAININ traditional conical tips.

EDP1 with LTS shaft

Cat. No.	Volume Range
E1-10	0.5–10 µl
E1-20	2–20 µl
E1-100	10–100 µl
E1-200	20–200 µl
E1-300	20–300 µl
E1-1000	100–1000 µl
E1-2000	200–2000 µl
E1-5000	500–5000 µl
E1-10ML	1000 µl–10 ml
E1-20ML	2000 µl–20 ml

RAININ LTS tips must be used with LTS pipettes.

Multichannel pipettes with LTS®

Ultralight and easy tip loading and ejection

- **Consistent sample pickup**
  Unique LTS system ensures consistent sample pickup and improves accuracy and precision.

- **Leak-free seal - first time, every time**
  The LTS cylindrical shaft and tip with single-point seal provides an excellent seal without O-rings

12-channel electronic

12-channel manual

Increase Productivity

Fastest Tip Loading
RAININ multichannel pipette loads tips in as little as two seconds. No rocking or hand-tightening is required, increasing reliability.

12-channel easier than 8
RAININ 12-channel pipettes are even easier to use than traditional 8-channel pipettes!

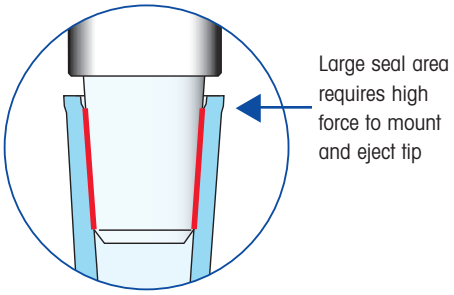
Electronic models offer automation
Multidispense, timed aliquots and mixing modes eliminate manual procedures by providing automation.

The world's most complete range of multichannel pipettes!

LTS® pipettes solve common multichannel problems

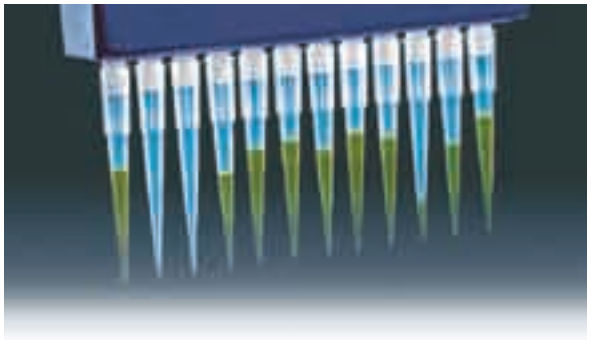
Multichannel Problems

High forces



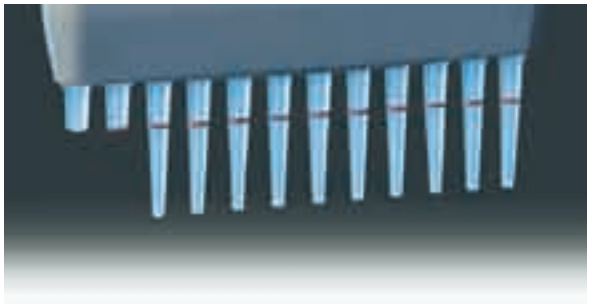
Traditional conical shafts and tips require high insertion force (up to 10 kg), plus rocking or hand-tightening to seal.

Inconsistent sample loading



Traditional tips may not seal properly, causing uneven sample pick-up.

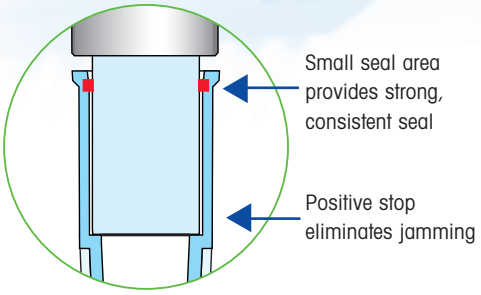
Some pipettes use nozzle O-rings



O-rings deteriorate with time, requiring increased force to insert and eject tips. Wear particles can contaminate samples. O-rings can weaken nozzles and must be removed for cleaning.

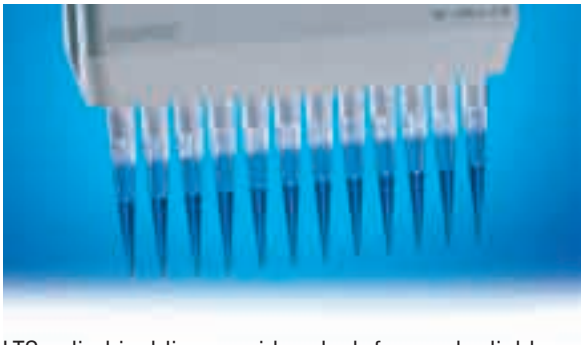
LTS Solution

Low forces



LTS cylindrical tips mount and eject easily, creating a reliable seal with minimum force (only 2.5 kg for 8-channel pipettes).

Consistent sample loading



LTS cylindrical tips provide a leak-free and reliable seal without hand tightening.

No nozzle O-rings with LTS

No O-rings, no breakage, no maintenance, no sample contamination, no problems.

EDP®3-Adjustable Spacer

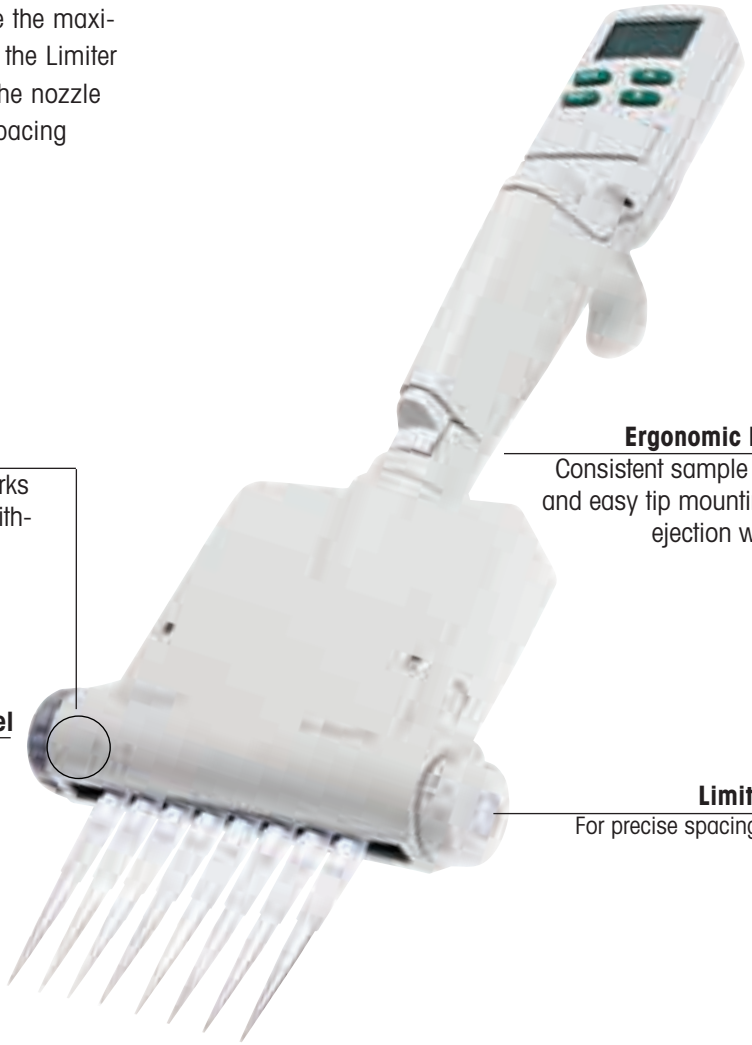
Unleashing Multichannel Pipetting

- **Adjustable from 9–19 mm**
- **Consistent sample pickup**
- **Fast tip loading and ejection**

New Product

The new EDP3-Adjustable Spacer allows you to increase your productivity with a multichannel pipette where you can change the format spacing – going from 24-well to 96-well at a twist. Move between formats and conquer new horizons in multichannel pipetting.

Easy and precise spacing adjustment
The nozzle spacing in the EDP3 Adjustable Spacer can be set between 9 mm and 19 mm. Once the maximum spacing is set with the Limiter dial, you can easily set the nozzle spacing by turning the Spacing Adjustment wheel.



Spacing marks
Easy-to-read spacing marks ensure a proper setting without guessing.

Ergonomic Design
Consistent sample pickup and easy tip mounting and ejection with LTS

Spacing Adjustment Wheel
For rapid change from maximum to minimum spacing

Limiter Dial
For precise spacing setting

Speed your lab workflow

Faster Workflow
EDP3-Adjustable Spacer requires less time to load tips and complete workflows, while ensuring a consistent sample loading every time. Additionally, because the liquid end rotates 360°, you can quickly align with the mother or daughter plate, with comfortable left or right-hand operation.

If you know EDP3, you know Adjustable Spacer
All features from the proven easy-to-use EDP3 electronic pipette are incorporated into the EDP3-Adjustable Spacer, such as Automatic Linearity Correction, Multidispensing, Titration, Dilution, Volume Sequencing, as well as long battery life.

- Nozzle spacing range
  9-19 mm, 6-channel
  9-14 mm, 8-channel
- Available in 20-300 and 100-1200 µl volume ranges
- Suitable for use with 24-, 48-, and 96-well plates, tubes, etc.
- Ergonomic LTS® LiteTouch™ Tip Ejection System. Uses LTS tips

Minimum to Maximum with a twist
Continuously variable spacing mechanism for maximum flexibility.

EDP3-Adjustable Spacer offers all the benefits of the regular EDP3 system, from precision to comfort to LTS, but with the added flexibility of setting nozzle spacing.

A Wall Power Supply or a Rapid Charge Stand must be purchased to charge the EDP3 Adjustable Spacer.

Ordering Information

EDP3-Adjustable Spacer

Cat. No.	Volume Range
6-Channel	
EA6-300	20–300 µl
EA6-1200	100–1200 µl
8-Channel	
EA8-300	20–300 µl
EA8-1200	100–1200 µl

Cat. No.	Volume Range
E3-WPS	Wall Power Supply
E3-RCS	Charging Stand

RAININ LTS tips must be used with LTS pipettes.

Manual Pipet-Lite®

Best for routine microwell plate applications

- **Left- or right-handed operation**
- **Liquid end rotates 360⁰**
- **Low-force tip ejection without nozzle O-rings**

Consistent sample pick-up
Unique LTS LiteTouch Tip System ensures consistent sample pick-up and improves accuracy and precision.

Rugged design ensures reliability
Pipet-Lite's robust construction provides years of consistent results with reliable service, reducing the cost of ownership.

Digital volume adjustment
Set volume quickly and precisely with just a few turns of the plunger button. Easy-to-use volume locking ring eliminates drifting of the volume setting.

8-channel

12-channel

Ordering Information
Pipet-Lite Multi w/ LTS

Cat. No.	Volume Range
8-channel	
L8-10	1–10 µl
L8-20	2–20 µl
L8-50	5–50 µl
L8-200	20–200 µl
L8-300	20–300 µl
L8-1200	100–1200 µl
12-channel	
L12-10	1–10 µl
L12-20	2–20 µl
L12-50	5–50 µl
L12-200	20–200 µl
L12-300	20–300 µl
L12-1200	100–1200 µl
16-channel (2x8)	
L2X8-20	2–20 µl
L2X8-100	10–100 µl
24-channel (2x12)	
L24-20	2–20 µl
L24-100	10–100 µl

Electronic EDP® 3-Plus

The ideal choice for high-production microwell plate applications

12-channel

- **Eliminate all plunger forces!**
- **Reduce fatigue, improve accuracy**
- **Low-force tip ejection without nozzle O-rings**

MULTIDISPENSE does the work for you

In MULTIDISPENSE mode, EDP3-Plus calculates the number of aliquots that can be dispensed from one pick-up. AUTOPACE simplifies repeat dispensing: just touch the trigger once and repeat dispense along the plate!

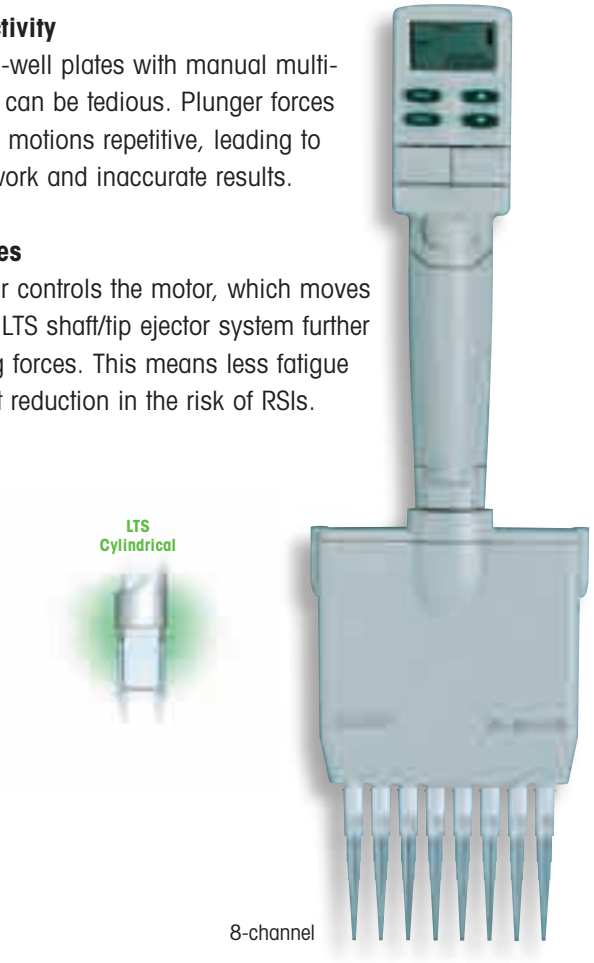
All other features of EDP3-Plus single-channel pipette are present.

Increase productivity

Pipetting into 96-well plates with manual multi-channel pipettes can be tedious. Plunger forces are high and the motions repetitive, leading to fatigue, slower work and inaccurate results.

No plunger forces

A microprocessor controls the motor, which moves the pistons. The LTS shaft/tip ejector system further reduces pipetting forces. This means less fatigue and a significant reduction in the risk of RSIs.



8-channel

Note: All RAININ multichannel pipettes in double-row format (16- and 24-channel) feature 9 mm center spacing. RAININ LTS tips must be used with LTS pipettes.

Ordering Information
EDP3-Plus Multi w/ LTS

Cat. No.	Volume Range
8-channel	
E8-10	1–10 µl
E8-20	2–20 µl
E8-50	5–50 µl
E8-200	20–200 µl
E8-300	20–300 µl
E8-1200	100–1200 µl
12-channel	
E12-10	1–10 µl
E12-20	2–20 µl
E12-50	5–50 µl
E12-200	20–200 µl
E12-300	20–300 µl
E12-1200	100–1200 µl
16-channel (2x8)	
E2X8-20	2–20 µl
E2X8-100	10–100 µl
24-channel (2x12)	
E24-20	2–20 µl
E24-100	10–100 µl
Power Accessories*	
E3-WPS	Wall Power Supply
E3-RCS	Rapid Charge Stand

Long-life, rechargeable Li-Ion battery included.
Either a Rapid Charge Stand or Wall Power Supply must be purchased to charge the EDP3 battery.

EDP® 1 Multichannel Electronic Pipette

Powerful capacity for high productivity microwell plate work

- **Full-numeric keyboard – set volumes and functions quickly!**
- **Finger trigger operation**
- **More powerful stepper motor**

Full numeric keyboard

Quickly and easily set volumes and functions without scrolling!

Convenient finger trigger

The EDP1 grip is designed so that the index finger naturally rests on the trigger when you hold the pipette lightly. Touching the index finger to the trigger is all that's needed to begin the pipetting cycle.

More powerful stepper motor

The stepper motor provides ample torque to power all EDP1 multichannel pipettes with absolute accuracy and repeatability; from the 10 µl 8-channel to the 1200 µl 12-channel model. Pipetting accurately into 96-well microplates is easy with EDP1.

Ordering Information
EDP1 Multi w/ LTS

Cat. No.	Volume Range
8-channel	
EP8-10	1–10µl
EP8-20	2–20µl
EP8-50	5–50µl
EP8-200	20–200µl
EP8-300	20–300µl
EP8-1200	100–1200µl
12-channel	
EP12-10	1–10µl
EP12-20	2–20µl
EP12-50	5–50µl
EP12-200	20–200µl
EP12-300	20–300µl
EP12-1200	100–1200µl
16-channel (2x8)	
EP2X8-20	2–20µl
EP2X8-100	10–100µl
24-channel (2x12)	
EP24-20	2–20µl
EP24-100	10–100µl
Power Accessories List	
6101-049	Rapid Charge Stand

EDP1 Multichannel pipettes include a battery and a wall power supply. All Rainin multichannel pipettes in double-row format (16- and 24-channel) feature 9 mm center spacing. EDP3 multichannel pipettes with LTS use only LTS tips.

Pipette specifications

For LTS® and traditional pipettes

Pipet-Lite, Pipet-Plus, RAININ Classic and E-Man Hybrid

Model	Set Volume µl	Increment µl	Accuracy %	Accuracy µl (±)	Precision %	Precision µl (≤)
2 µl	0.2	0.002	12	0.024	6	0.012
	1.0		2.7	0.027	1.3	0.013
	2.0		1.5	0.030	0.7	0.014
10 µl	1	0.02	2.5	0.025	1.2	0.012
	5		1.5	0.075	0.6	0.03
	10		1	0.1	0.4	0.04
20 µl	2	0.02	7.5	0.15	2	0.04
	10		1.5	0.15	0.5	0.05
	20		1	0.2	0.3	0.06
100 µl	10	0.2	3.5	0.35	1	0.1
	50		0.8	0.4	0.24	0.12
	100		0.8	0.8	0.15	0.15
200 µl	20	0.2	2.5	0.5	1	0.2
	100		0.8	0.8	0.25	0.25
	200		0.8	1.6	0.15	0.3
300 ul	30	0.5	2.5	0.75	1.0	0.3
	150		0.8	1.2	0.25	0.375
	300		0.8	2.4	0.15	0.45
1000 µl	100	2	3	3	0.6	0.6
	500		0.8	4	0.2	1
	1000		0.8	8	0.15	1.5
2000 µl	200	2	3	6	0.6	1.2
	1000		0.8	8	0.2	2
	2000		0.8	16	0.12	2.4
5000 µl	500	5	2.4	12	0.6	3
	2500		0.6	15	0.2	5
	5000		0.6	30	0.16	8
10 ml	1 ml	20	5	50	0.6	6
	5 ml		1	50	0.2	10
	10 ml		0.6	60	0.16	16
20 ml	2 ml	20	5	100	0.6	12
	10 ml		1	100	0.2	20
	20 ml		0.6	120	0.16	32

Note: Rainin Classic volumes are 2, 10, 20, 100, 200, 1000, 5000 µL and 10 ml

EDP1 and EDP3-Plus

Model	Set Volume µl	Increment µl	Accuracy %	Accuracy µl (±)	Precision %	Precision µl (≤)
10 µl	1	0.01	2.5	0.025	1.2	0.012
	5		1.5	0.075	0.6	0.03
	10		1.0	0.1	0.4	0.04
20 µl	2	0.02	7.5	0.15	2	0.04
	10		1.5	0.15	0.5	0.05
	20		1.0	0.2	0.3	0.06
100 µl	10	0.1	3.5	0.35	1	0.1
	50		0.8	0.4	0.24	0.12
	100		0.8	0.8	0.15	0.15
200 µl	20	0.2	2.5	0.5	1	0.2
	100		0.8	0.8	0.25	0.25
	200		0.8	1.6	0.15	0.3
300 ul	30	0.2	2.5	0.75	1	0.3
	150		0.8	1.2	0.25	0.373
	300		0.8	2.4	0.15	0.45
1000 µl	100	1	3	3	0.6	0.6
	500		0.8	4	0.2	1
	1000		0.8	8	0.15	1.5
2000 µl	200	2	3	6	0.6	1.2
	1000		0.8	8	0.2	2
	2000		0.8	16	0.12	2.4
5000 µl	500	5	2.4	12	0.6	3
	2500		0.6	15	0.2	5
	5000		0.6	30	0.16	8
10 ml	1 ml	10	5	50	0.6	6
	5 ml		1	50	0.2	10
	10 ml		0.6	60	0.16	16
20 ml	2 ml	20	5	100	0.6	12
	10 ml		1	100	0.2	20
	20 ml		0.6	120	0.16	32

Pos-D Positive-Displacement

Model	Volume µl	Increment µl	Accuracy %	Accuracy µl (±)	Precision %	Precision µl (≤)
10 µL	1	0.02	9.0	0.09	3.0	0.03
	5		2.0	0.10	0.6	0.03
	10		1.5	0.15	0.6	0.06
25 µL	3	0.02	8.3	0.25	2.7	0.08
	10		2.7	0.27	0.8	0.08
	25		1.2	0.30	0.4	0.10
50 µL	20	0.02	1.7	0.34	1.0	0.20
	50		1.4	0.70	0.6	0.30
100 µL	10	0.2	5.0	0.50	2.0	0.20
	50		1.5	0.75	0.6	0.30
	100		1.0	1.00	0.4	0.40
250 µL	50	0.2	3.0	1.50	0.6	0.30
	100		1.7	1.70	0.3	0.30
	250		1.0	2.50	0.2	0.50
1000 µL	100	2	3.0	3.00	1.6	1.60
	500		1.0	5.00	0.5	2.50
	1000		0.8	8.00	0.4	4.00

Multichannel manual and electronic pipettes

Model	Set Volume µl	Increment µl (man)	Increment µl (elec)	Accuracy %	Accuracy µl (±)	Precision %	Precision µl (≤)
10 µl	1	0.02	0.01	2.5	0.025	1.2	0.012
	5			1.5	0.075	0.6	0.03
	10			1.0	0.1	0.4	0.04
20 µl	2	0.02	0.02	7.5	0.15	2.0	0.04
	10			1.5	0.15	0.5	0.05
	20			1.0	0.2	0.3	0.06
50 µl	5	0.05	0.05	3.5	0.18	1.5	0.075
	25			1.2	0.3	0.4	0.1
	50			0.8	0.4	0.2	0.1
200 µl	20	0.2	0.2	2.5	0.5	1.0	0.2
	100			0.8	0.8	0.25	0.25
	200			0.8	1.6	0.15	0.3
300 µl	30	0.5	0.2	2.5	0.75	1.0	0.3
	150			0.8	1.2	0.25	0.375
	300			0.8	2.4	0.15	0.45
1200 µl	100	2	1	3.6	3.6	0.6	0.6
	600			0.8	4.8	0.2	1.2
	1200			0.8	9.6	0.15	1.8

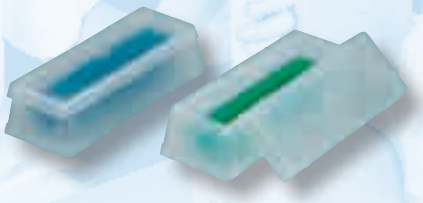
Accessories for multichannel pipettes

Reagent reservoirs

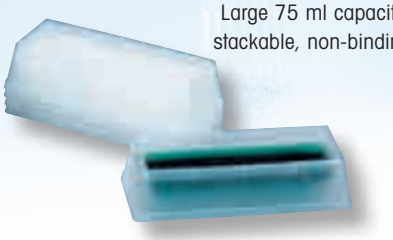
- **Sturdy polypropylene; V-shaped basin**
- **Sterile**
- **Large 75 ml capacity**

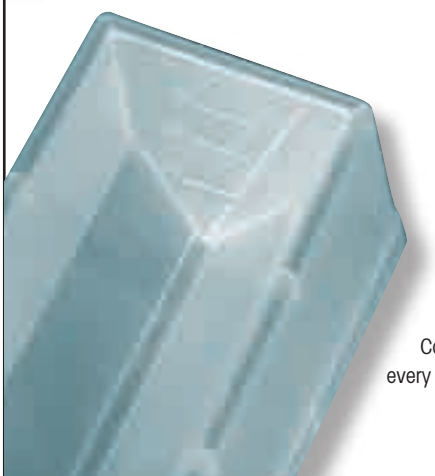
Sterile polypropylene reagent reservoirs for use with single- and multichannel pipettes. Reservoirs are stable and stackable, available with or without lid. Large 75 ml capacity with easy-to-read calibration markings.

Available with or without lid



Large 75 ml capacity; stackable, non-binding



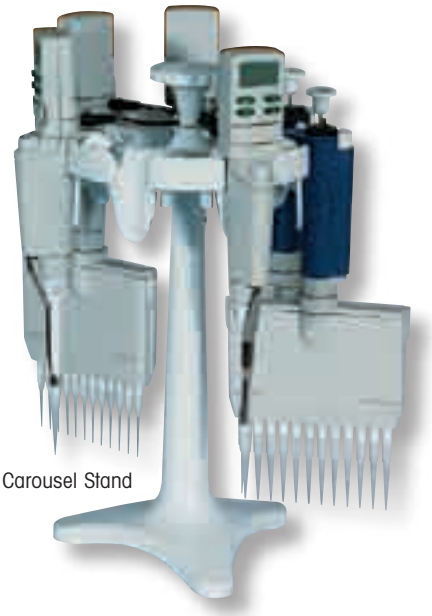


Calibration marks every 10 ml to 60 ml

Adapter for Hang-Ups and Carousel Stand

Ideal for multichannel and EDP3 electronic pipettes, the adapter slips easily into a Hang-Up (HU-M3) or Carousel Stand (CR-7). No tools are required. 3 per package.

Adapter in Hang-Up



Carousel Stand

Ordering Information

Cat. No.	Description Reagent Reservoirs
Reagent Reservoirs	
RV-L25	25 reservoirs and 75 ml capacity with lids; presterilized, packaged 5 bags of 5 each
RV-050	50 reservoirs and 75 ml capacity without lids; presterilized, packaged 10 bags of 5 each
Hang-Ups, Carousel, and Adapters	
HU-A3	Adapter
HU-M3	Hang-Ups
CR-7	Carousel Stand

Accessories for electronic pipettes

EDP1

Rapid Charge Stand (optional)

Convenient stand charges the EDP1 Battery Pack. Recharging a Battery Pack on this stand takes just 90 minutes, compared to 12-14 hours when using the Wall Power Supply attached to the pipette.
Also works with original EDP-Plus.
A Wall Power Supply and a Battery Pack are included with the purchase of a complete EDP1 Pipette.

EDP3

Rapid Charge Stand

Stores up to three EDP3 pipettes and recharges them sequentially. Can be mounted on a wall. Supplied with a Wall Power Supply (E3-WPS).

Wall Power Supply

Completely recharges EDP3 in about an hour. Allows operation while recharging, or directly without a battery.

Either a Wall Power Supply or Rapid Charge Stand MUST be purchased to charge the EDP3 Battery.

Hang-Up

Ordering Information

Cat. No.	Description Reagent Reservoirs
6101-049	Rapid Charge Stand (EDP1)
E3-WPS	Wall Power Supply
E3-RCS	Rapid Charge Stand

bioclean™ Pipette Tips

RAININ's tip manufacturing facility – designed to deliver the cleanest tips

A clean manufacturing process designed to reduce the risks of contamination is the only way to ensure clean pipette tips will be delivered to every laboratory.
This involves implementing these critical procedures and controls at the tip production facility.

- **Staff procedures and training**
- **Clean packaging**
- **Automated material handling**
- **Inspection**
- **Clean Room environment**
- **Certification**

Protecting Sample Integrity

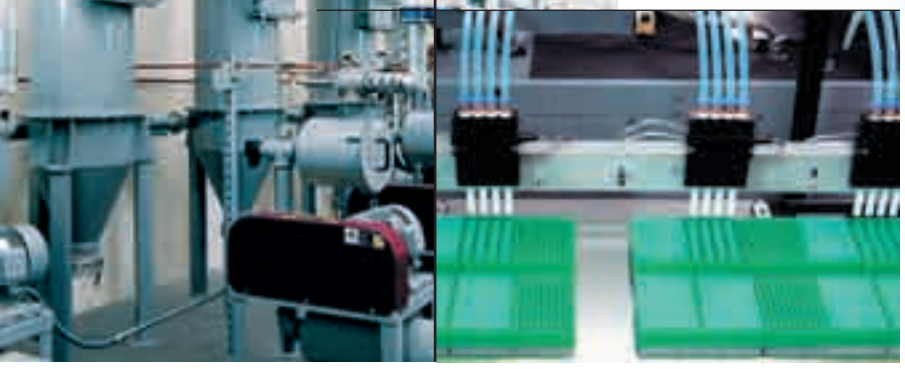
Clean pipette tips are critical in life science research. To ensure high quality lab results, tips coming into contact with samples must be free of DNase, RNase, DNA, pyrogen and adenosine triphosphate (ATP). Understanding these typical sample contaminants and taking precautionary measures to reduce or eliminate these contamminants at their source is vital to protecting sample integrity.

Contamination originates both in and out of the lab
Human contact is the primary source of contamination. Poor handling procedures, such as not using protective gloves or inadvertently exposing tips to other contamination sources in the laboratory, can compromise tip cleanliness. The manufacturing process and tip packaging environment is another potential contamination source that should not be overlooked.

How can contaminants be reduced or eliminated?
Laboratory personnel typically employ a set of procedures to assure sources of contamination in the lab are minimized. But because sample contaminants can originate outside the lab, it is important to evaluate what controls have been put into place at the production level, to assure that possible risk factors have been reduced or eliminated before the product arrives in the lab.

Class 100,000 Clean Room Manufacturing

Large vacuum loaders move material directly to molding machines



Robots load tips Into racks eliminating human contact

The Bioclean™ Process

Proper staff procedures and training

All RAININ manufacturing personnel wear masks, gloves, and hair nets to reduce the risk of introducing contamination. Strict ISO 9001 procedures are enforced in training manufacturing staff on the importance of contaminant-free tip products.

Class 100,000 Clean Room

RAININ's manufacturing facility, specifically designed for tip production and packaging, contains over 20,000 square feet of Class 100,000 Clean Rooms. HEPA filters and positive pressure ensure that contaminants cannot enter the tip production area.

Automated material handling

RAININ's fully automated material handling process feeds virgin polypropylene material from stainless steel silos directly to each molding machine. At molding temperatures of 250°C, tips are effectively sterilized. Automated tip loading into racks and bags further reduces risk of contamination.

Tip Certification

Filtered and pre-sterilized bioclean tips also receive gamma radiation and include a certificate.

Contaminants tested	Testing detection levels
RNase	≤ 10^{-9} Kunitz units/µl
DNase	≤ 10^{-7} Kunitz units/µl
DNA	≤ 30 picograms/µl
Pyrogens (LAL test)	0.001 EU/ml
ATP	< 10^{-12} mg/µl

Quality assurance tip Inspection

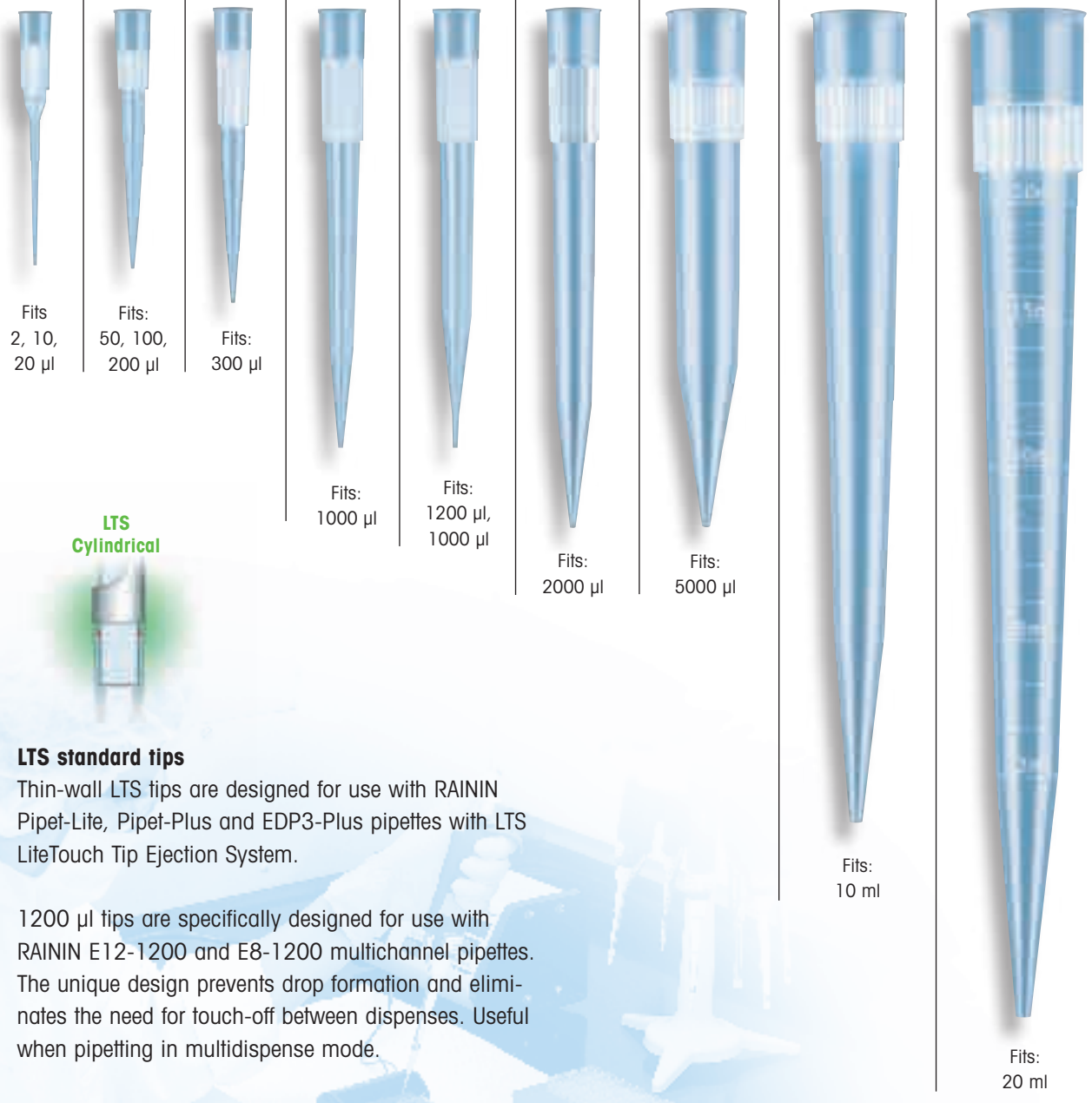
In-house and third-party microbiology testing laboratories

LTS® tips for RAININ® pipettes with LTS shaft

Nine sizes for volume ranges from 0.1 µl to 20 ml

Nominal volume

10 µl	250 µl	300 µl	1000 µl	1200 µl	2000 µl	5000 µl	10 ml	20 ml



Fits 2, 10, 20 µl

Fits: 50, 100, 200 µl

Fits: 300 µl

Fits: 1000 µl

Fits: 1200 µl, 1000 µl

Fits: 2000 µl

Fits: 5000 µl

Fits: 10 ml

Fits: 20 ml

LTS Cylindrical

LTS standard tips

Thin-wall LTS tips are designed for use with RAININ Pipet-Lite, Pipet-Plus and EDP3-Plus pipettes with LTS LiteTouch Tip Ejection System.

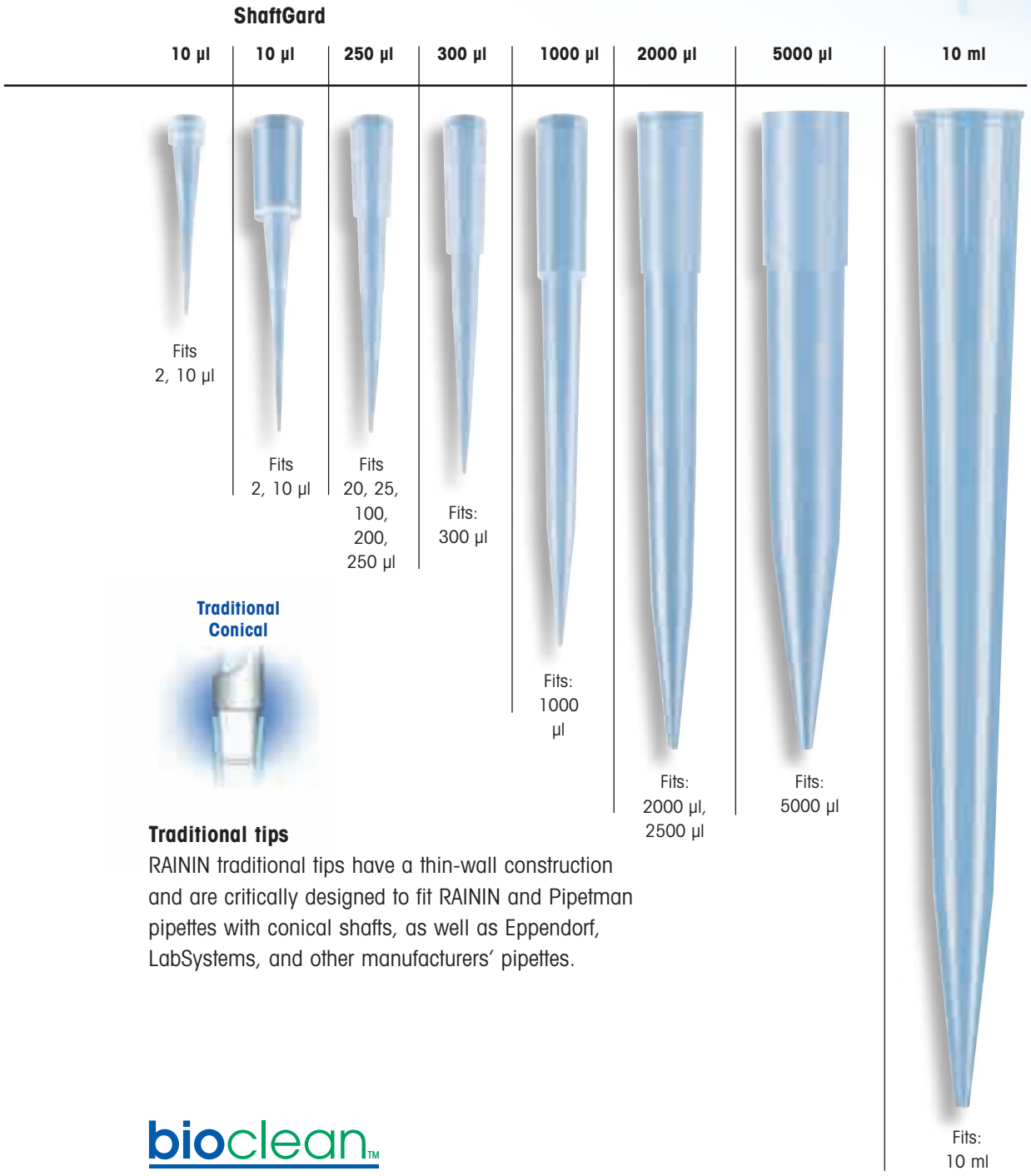
1200 µl tips are specifically designed for use with RAININ E12-1200 and E8-1200 multichannel pipettes. The unique design prevents drop formation and eliminates the need for touch-off between dispenses. Useful when pipetting in multidispense mode.

10 ml and graduated 20 ml tips are available in bulk or individually wrapped if presterilized.

For ordering information, see page 42-43.

Traditional tips for RAININ®, Pipetman®, and other conical shaft pipettes

Seven sizes for volume ranges from 0.1 µl to 10 ml



Traditional tips

RAININ traditional tips have a thin-wall construction and are critically designed to fit RAININ and Pipetman pipettes with conical shafts, as well as Eppendorf, LabSystems, and other manufacturers' pipettes.

bioclean™

For ordering information, see page 44-45.

Aerosol Resistant LTS® and Traditional Tips

Proven protection against aerosol contamination

- **Certified free of RNase, DNase, DNA, Pyrogens, and ATP**
- **Reduce inventory by 40% with LTS tips**
- **Eliminate over-pipetting with LTS tips**

Hydrophobic filter eliminates contamination

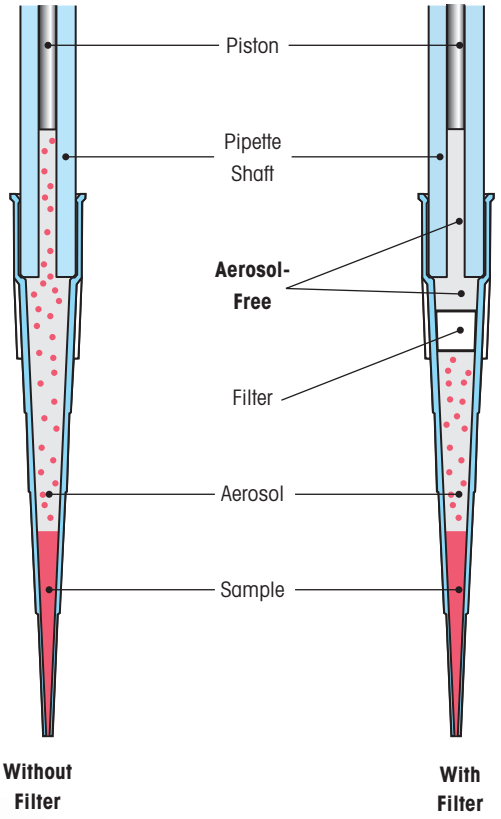
The hydrophobic filter forms a barrier against aerosols and liquids, eliminating potential sample and pipette cross-contamination that could jeopardize results.

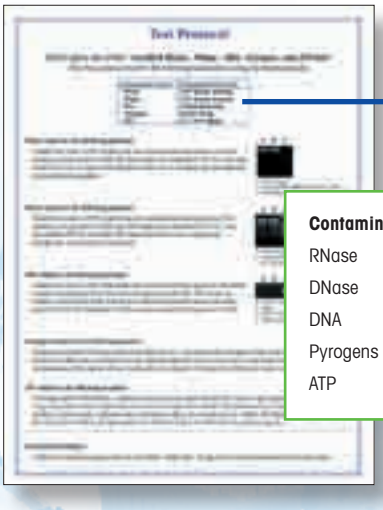
Pure polyethylene, no additives, no contaminants

Filters used in RAININ aerosol-resistant tips are an extremely strong chemically inert matrix molded from pure virgin polyethylene that does not flake or shed particles. The average pore size of 20 microns prevents aerosol passage but does not restrict air flow. RAININ never uses additives, which could contaminate samples.

Certification

Filtered and pre-sterilized bioclean tips are gamma-irradiated to ensure the packaged product is free of bio-burden contamination. Each tip lot is process-tested to specifications shown next to the right and labeled "Certified free of DNase, RNase, DNA, Pyrogen, and ATP." A test protocol certificate is included in each package.





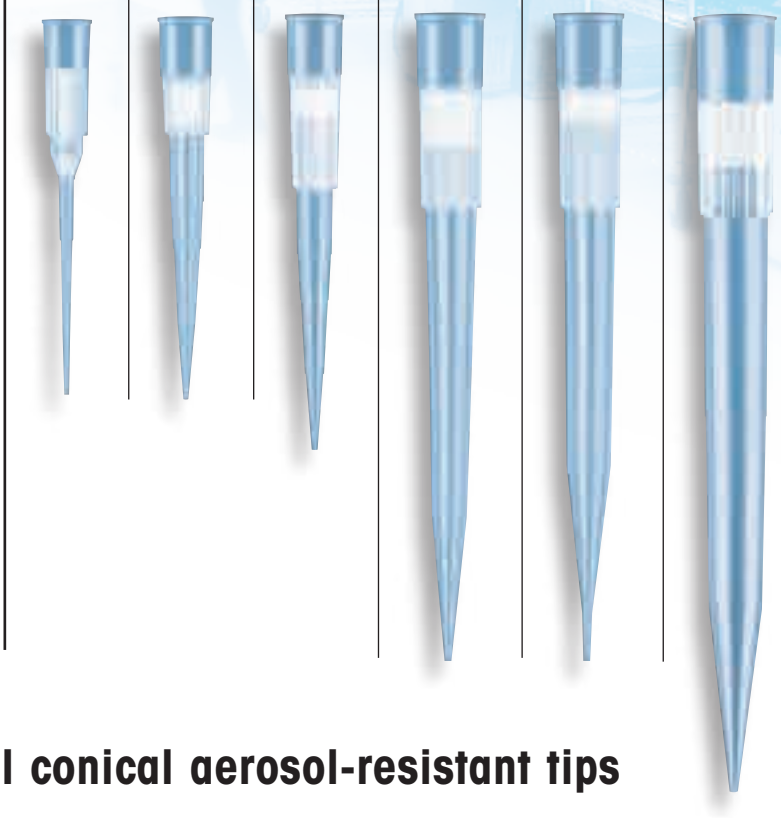
Contaminants	Tested Testing Detection Levels
RNase	≤ 10^{-9} Kunitz units/µl
DNase	≤ 10^{-7} Kunitz units/µl
DNA	≤ 30 picograms/µl
Pyrogens (LAL test)	0.001 EU/ml
ATP	< 10^{-12} mg/µl

To obtain a copy of the test protocol, go to **www.rainin.com/pdf/test_protocol.pdf**
To obtain a reprint of the "Protecting Sample Integrity…" technical report, go to **www.rainin.com/pdf/tr2004-1.pdf**

bioclean™ LTS® cylindrical aerosol-resistant tips

LTS Maximum Volumes

20 µl | 200 µl | 300 µl | 1000 µl | 1200 µl | 2000 µl



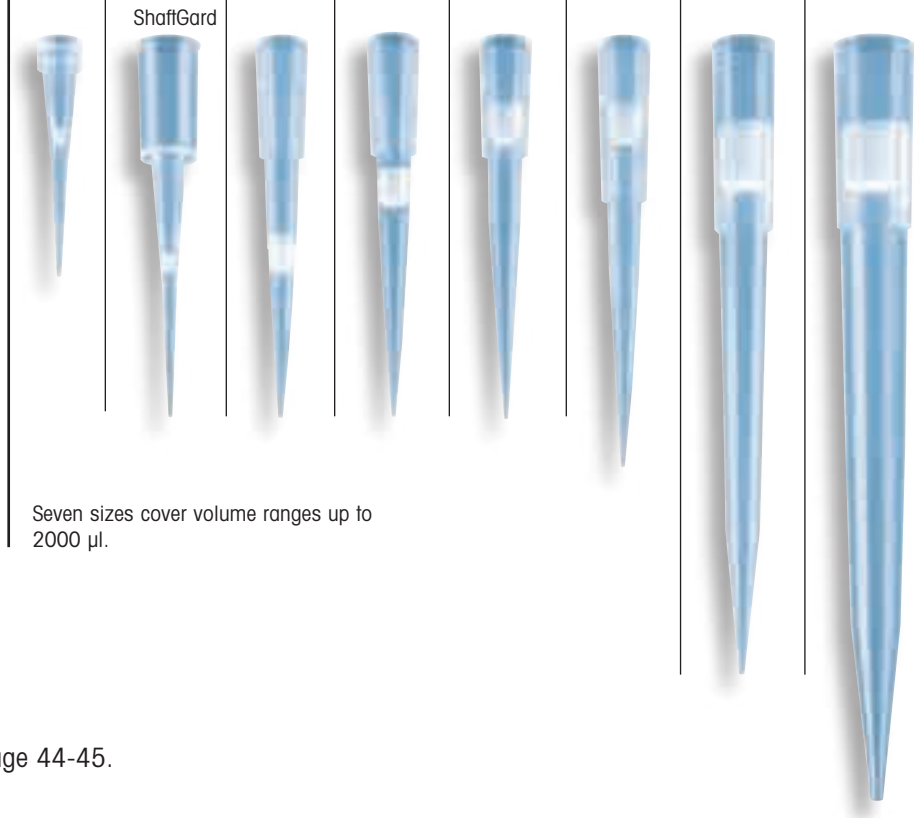
3 filter tips instead of 5!
The LTS system requires just three filter tips, instead of five, for LTS pipettes in the popular sizes from 2 µl to 1000 µl. No need to stock a separate tip for 20 µl and 100 µl volumes. You can reduce your filter tip inventories by 40% and put an end to confusion over tip sizes.
Only six sizes cover volume ranges up to 2000 µl. For ordering information, see page 38-39.

Eliminates over-pipetting
Since LTS tips will only fit on the correct LTS shaft, it is impossible to use the wrong tip and "over-pipette" liquid into the filter or pipette shaft.

Traditional conical aerosol-resistant tips

Traditional Maximum Volumes

10 µl | 10 µl | 30 µl | 100 µl | 200 µl | 300 µl | 1000 µl | 2000 µl



Seven sizes cover volume ranges up to 2000 µl.

For ordering information, see page 44-45.

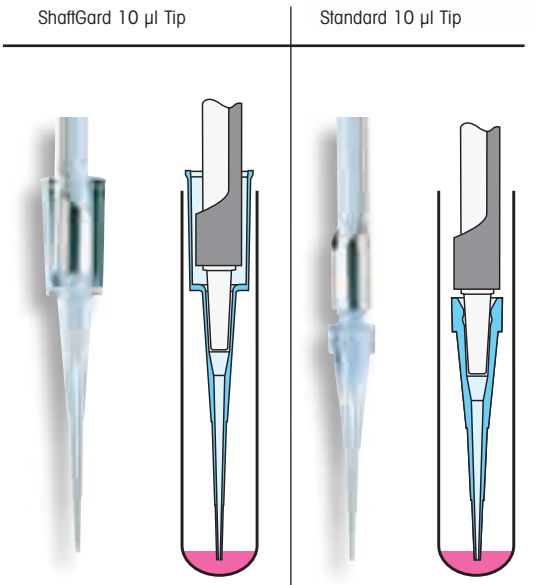
ShaftGard™ Traditional Conical 10 µl Tips

The best insurance against cross-contamination

Complete protection of shaft and tip ejector
The shaft and tip ejector fit inside the ShaftGard tip, protecting them from accidental contamination. This reduces the need to decontaminate or sterilize the pipette shaft and tip ejector when working with biological, radioactive, or other critical samples.

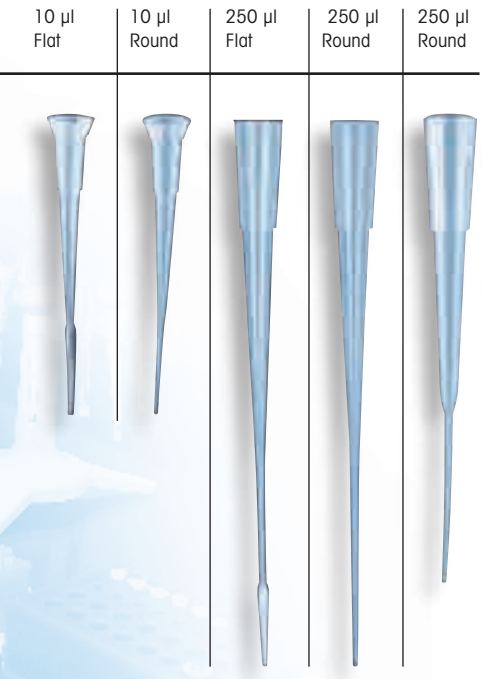
Contamination-free tip ejection
Most pipette tips are ejected by the tip ejector pressing on the top edge of the tip. With ShaftGard tips, the tip ejector is enclosed by the tip and ejects the tip by pressing on the "shoulder" inside the tip – affording further protection against contamination.

Longer for microtube access
ShaftGard tips are significantly longer than standard micro-10 tips for easier access into microcentrifuge and PCR tubes. Use with 2 and 10 µl pipettes with traditional, conical shafts.


ShaftGard 10 µl Tip
Standard 10 µl Tip
Shaft and tip ejector protected from contamination from vessel walls
Shaft and tip ejector may be contaminated by vessel walls

Gel-Well™

Traditional Conical Tips



RAININ's Gel-Well tips are designed for dispensing samples into narrow wells in electrophoretic slab gel apparatus, for sample recovery, or when high accuracy is required at low volumes. The flexible ultrathin microcapillary is ideal for nucleic acid (DNA) sequencing and protein separation.

Autoclave cycles at 1 bar and 121°C up to 15 minutes are possible without significant capillary shrinkage or closure.

- **Available with flat or round tip ends**
- **Certified RNase/DNase-free**

RAININ's Gel-Well tips fit RAININ, Pipetman, and other pipettes with traditional conical shafts.

Large Volume Tips

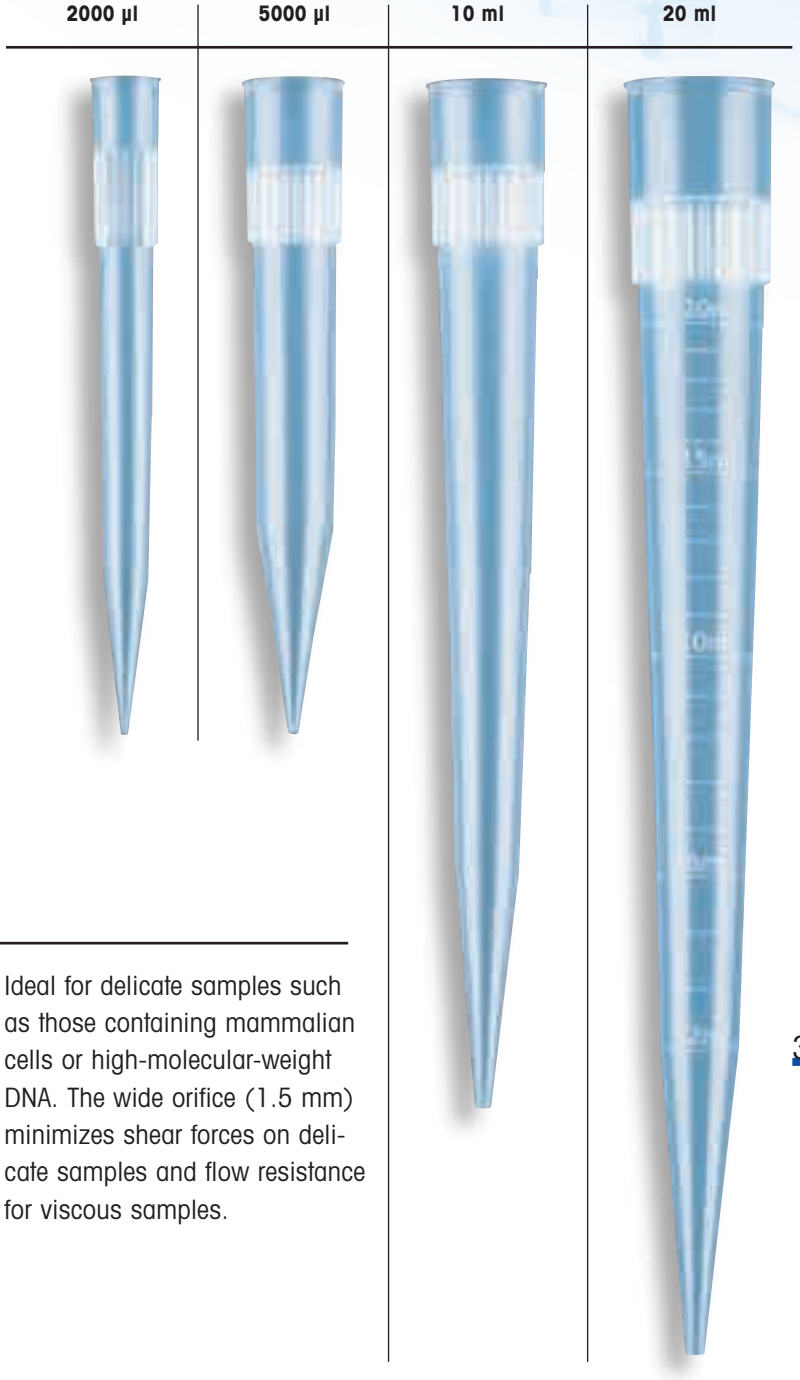
Deliver large volume accuracy

Macro FinePoint tips deliver large volumes with the same accuracy as smaller volumes.

Traditional Conical

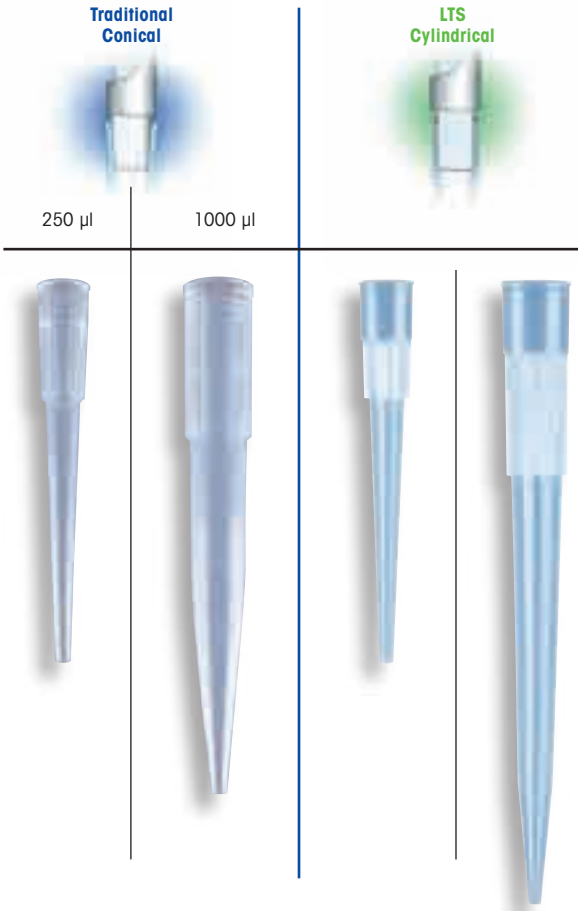
The 2000 µl tips are available in removable cover racks, standard, pre-sterilized, and with aerosol-resistant filters. The 5000 µl tips are also available in removable-cover racks, standard or presterilized.

The 20 ml tips (LTS only) have graduation marks. Both 10 ml and 20 ml tips are available presterilized in individual packets, as well as in bulk.



Wide-Orifice Tips

Ideal for delicate samples



Ideal for delicate samples such as those containing mammalian cells or high-molecular-weight DNA. The wide orifice (1.5 mm) minimizes shear forces on delicate samples and flow resistance for viscous samples.

bioclean™

Extended-Length LTS® Tips

For pipetting into tall narrow tubes

- **Reaches the bottom of tall narrow vials**
- **Fits inside 8 mm diameter opening**
- **Supplied in racks: standard, presterilized, and with filters**

102 mm long
RAININ extended-length LTS tips will reach to the bottom of blocks, tall vials, flasks, 100 mm tubes, etc.

Narrow diameter
The outside diameter of these tips passes through 8 mm ID penetrable septa, such as on the Gen-Probe® APTIMA® specimen collection kits. Reach the bottom of these vials easily, without the pipette shaft touching the vessel wall and becoming contaminated.

Racked for convenience
Supplied in racks, standard, pre-sterilized and with aerosol-resistant filters. The RTL-1000X series tips hold a full 1200 µl volume.

Gen-Probe® and APTIMA® are registered trademarks of Gen-Probe Inc.

Low Retention Tips for LTS® Pipettes

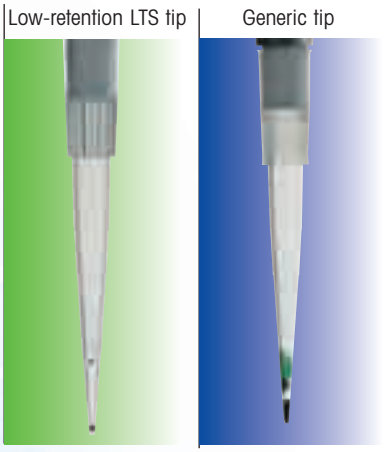
For pipetting proteins, enzymes and DNA

- **Ultra-hydrophobic tip surface minimizes liquid retention**
- **RAININ process protects your valuable reagents**
- **Less retention means less waste, better performance**

Ultra hydrophobic tips
RAININ uses 100% inert virgin polypropylene for tips. No silicone, fillers, clarifiers or releasing agents are ever added that could contaminate your samples.
RAININ's high-quality and highly polished tip molds produce extremely smooth tip surfaces free of surface defects.
Then RAININ creates an exposed trifluoromethyl surface on the interior and exterior walls of the polypropylene tip. This highly inert fluorocarbon polymer
– not compromised by autoclaving
– creates very low surface energy to help repel liquids.

Low-retention tips perform better
RAININ low-retention ultra hydrophobic tips ensure higher pipetting accuracy and reproducibility, even when working with binding samples. More pipetting accuracy means less waste of your valuable samples.

In 10, 250, and 1000 µl volumes



Minimal retention of dense sample

Dense sample binding in low-quality tips

Green-Pak® SpaceSaver® refills

Stop the waste, spare the environment!

The environmental solution for tip-rack refilling that's fast and fun. Best for reducing waste and saving space.

Gain bench space, reduce waste
The entire SpaceSaver system is packaged in a code 1 PET sleeve – the same recyclable material used for plastic soda bottles. Recycle at your local recycling center!

Load 96 tips in seconds!
The sleeve functions as an automatic tip dispenser that aligns and refills an empty rack with 96 tips at a time.

No contamination
SpaceSaver refills are protected from contamination by the outer sleeve, one preloaded rack and lid. After loading, the tips may be autoclaved in the rack.

Ten stacked refills are provided with 10 µl, 250 µl SpaceSaver, eight with 300 µl and 1000 µl.

Available with standard or presterilized LTS or traditional tips for filling RAININ 96-place removable-cover racks.

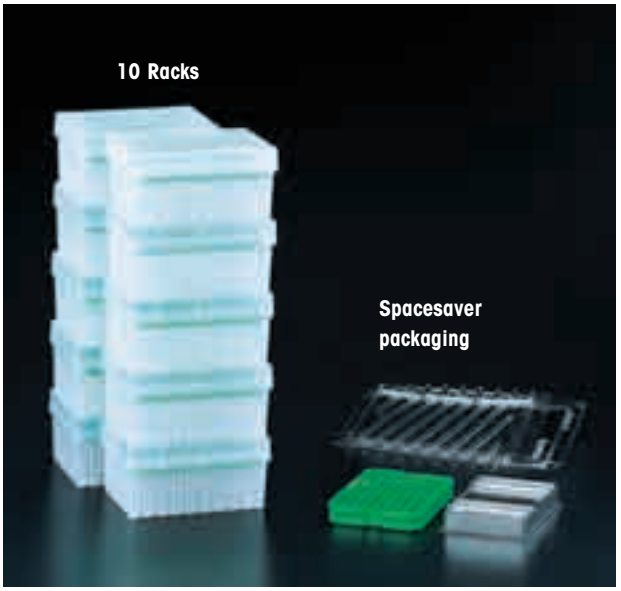
1000 µl 250 µl 10 µl

- **70% less space**
- **Fast loading; no contamination**

1. Align

2. Press to load tips into the rack

- **85% less plastic waste**



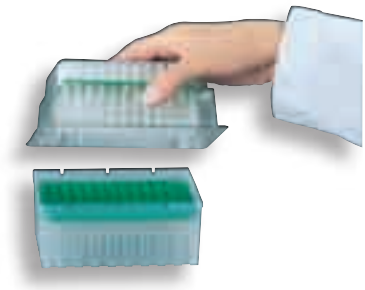
Green-Pak® Individual Refills

Ideal refill solution for filter tip users

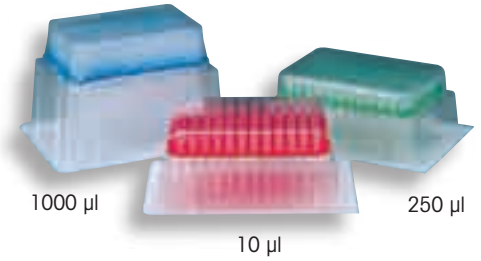
Reduce plastic waste by 75%
Green-Pak refills use 75% less plastic than conventional packaging, resulting in less plastic waste. Each Green-Pak refill package contains 96 tips in 8 x 12 format, sealed in a shell of Code 1 PET recyclable plastic.

Ideal for users of aerosol-resistant tips
Green-Pak is ideal when using aerosol-resistant tips, or when sterility is important. All filter and presterilized tips are irradiated in the Green-Pak shell and are certified free of DNase, RNase, DNA, pyrogens, and ATP. Standard tips may be autoclaved after reloading.

Individual Refill Protection
Each Green-Pak refill is completely sealed to protect the enclosed tips from dirt, dust, and other airborne contaminants. During loading, hands and fingers never contact the tips.



Place self-aligning package over empty rack, then snap down

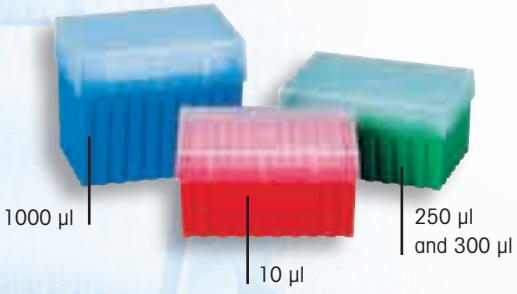


Removable-Cover Racks

Protect unused tips from contamination
Sealed bottoms and overlapping lids protect tips from dust, dirt and micro-organisms. Two-position lid allows autoclaving with the lid in the vent position.

Easy tip loading
The sturdy, non-flexing shelf construction allows easy tip loading with single and multichannel pipettes.

Available in 96-place format; 10, 250, 300, 1000, 2000, and 5000 µl volumes; standard, presterilized, and with aerosol-resistant filters; in LTS or traditional tip design. 1200 µl tips are available in LTS only.



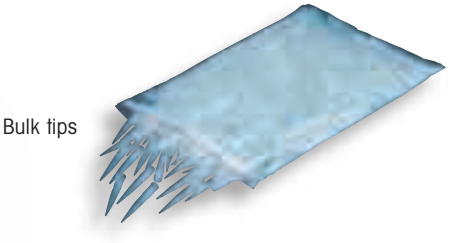
Bulk Tips

Economical way to buy RAININ high-quality tips
Bulk tips are packaged in zip-lock bags.

LTS cylindrical bulk tips are available in the following sizes: 10, 250, 300, 1000, 2000, 5000 µl, 10 ml, and 20 ml. 10 ml and 20 ml are available individually wrapped and presterilized.

Traditional conical bulk tips are available in 10, 250, 1000, 2000, 2500, 5000 µl and 10 ml. The 10 ml tips are available individually wrapped and presterilized.

Super-bulk tips (10 packages of 1000 tips) are available in LTS cylindrical and traditional conical format in 10, 250, and 1000 µl volumes.



Bulk tips

bioclean™

StableStak™ racks

Ideal for multichannel pipettes in high-production environments

- **960 tips in five stacked double-96 racks**
- **Strong, flat trays for even tip-loading**
- **Deep-well tip alignment for quick mounting**
- **Non-skid feet keep racks in one spot**

60% less plastic waste; saves space
Just one 5-layer StableStak (960 tips) equals 10 standard 96-place racks.

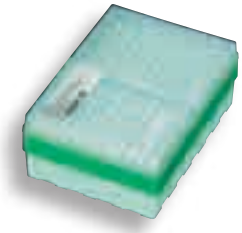
No refills required; less downtime
Simply remove each interlocking layer as tips are used, and a new layer of 192 tips is ready to use. You save time, space and plastic waste.

60% less plastic waste
One StableStak (960 tips) replaces ten 96-place racks.

StableRak™

Ideal for filter tip users in high-production environments

- **192 tips in one double-96 rack**



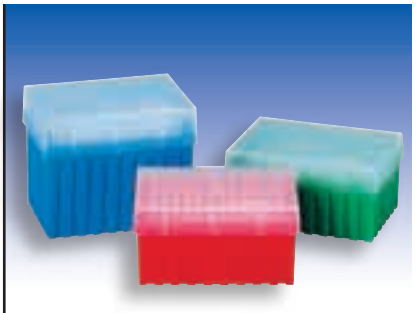
Ideal for filter tip users. Each StableRak contains 192 tips in one rack, instead of two. Available non-sterile, presterilized, and presterilized with aerosol-resistant filters.

35% less plastic waste; saves space

A package of five StableRaks (960 tips) equals 10 standard 96-place racks.

LTS® Tips

for RAININ® pipettes with LTS cylindrical shafts



Removable-Cover Racks

Cat. No.	Description	Maximum Capacity	Fits LTS Pipette	Type
RT-L10	960 tips in 10 racks	20 µl	2, 10, 20	
RT-L10S	960 tips in 10 racks	20 µl	2, 10, 20	Presterilized
RT-L10F	960 tips in 10 racks	20 µl	2, 10, 20	Filter, presterilized
RT-L250	960 tips in 10 racks	200 µl	50,100, 200	
RT-L250S	960 tips in 10 racks	200 µl	50,100, 200	Presterilized
RT-L200F	960 tips in 10 racks	200 µl	50,100, 200	Filter, presterilized
RT-L250W	960 tips in 10 racks	200 µl	50,100, 200	Wide-Orifice
RT-L250WS	960 tips in 10 racks	200 µl	50,100, 200	Wide-Orifice, presterilized
RT-L300	768 tips in 8 racks	300 µl	300	
RT-L300S	768 tips in 8 racks	300 µl	300	Presterilized
RT-L300F	768 tips in 8 racks	300 µl	300	Filter, presterilized
RT-L1000	768 tips in 8 racks	1000 µl	1000	
RT-L1000S	768 tips in 8 racks	1000 µl	1000	Presterilized
RT-L1000F	768 tips in 8 racks	1000 µl	1000	Filter, presterilized
RT-L1000W	768 tips in 8 racks	1000 µl	1000	Wide-Orifice
RT-L1000WS	768 tips in 8 racks	1000 µl	1000	Wide-Orifice, presterilized
RT-L1200	768 tips in 8 racks	1200 µl	1200, 1000	
RT-L1200S	768 tips in 8 racks	1200 µl	1200, 1000	Presterilized
RT-L1200F	768 tips in 8 racks	1200 µl	1200, 1000	Filter, presterilized
RT-L2000	480 tips in 8 racks	2000 µl	2000 µl	
RT-L2000S	480 tips in 8 racks	2000 µl	2000 µl	Presterilized
RT-L2000F	480 tips in 8 racks	2000 µl	2000 µl	Filter, presterilized
RT-L5000	192 tips in 8 racks	5000 µl	5000 µl	
RT-L5000S	192 tips in 8 racks	5 ml	5000 µl	Presterilized

Green-Pak SpaceSaver

Cat. No.	Description	Maximum Capacity	Fits LTS Pipette	Type
GPS-L10	960 tips in 10 refills	20 µl	2, 10, 20	
GPS-L10S	960 tips in 10 refills	20 µl	2, 10, 20	Presterilized
GPS-L250	960 tips in 10 refills	200 µl	50,100, 200	
GPS-L250S	960 tips in 10 refills	200 µl	50,100, 200	Presterilized
GPS-L300	768 tips in 8 refills	300 µl	300	
GPS-L300S	768 tips in 8 refills	300 µl	300	Presterilized
GPS-L1000	768 tips in 8 refills	1000 µl	1000	
GPS-L1000S	768 tips in 8 refills	1000 µl	1000	Presterilized

Low-retention Tips

Cat. No.	Description	Maximum Capacity	Fits LTS Pipette	Type
RT-L10LR	960 tips in 10 racks	20 µl	2, 10, 20	Low-Retention
RT-L10SLR	960 tips in 10 racks	20 µl	2, 10, 20	Presterilized, Low-Ret.
RT-L10FLR	960 tips in 10 racks	20 µl	2, 10, 20	Filter, presterilized, Low-Ret.
RT-L250LR	960 tips in 10 racks	200 µl	50,100, 200	Low-Retention
RT-L250SLR	960 tips in 10 racks	200 µl	50,100, 200	Presterilized, Low-Ret.
RT-L200FLR	960 tips in 10 racks	200 µl	50,100, 200	Filter, presterilized, Low-Ret.
RT-L1000LR	768 tips in 8 racks	1000 µl	1000	Low-Retention
RT-L1000SLR	768 tips in 8 racks	1000 µl	1000	Presterilized, Low-Ret.
RT-L1000FLR	768 tips in 8 racks	1000 µl	1000	Filter, presterilized, Low-Ret.

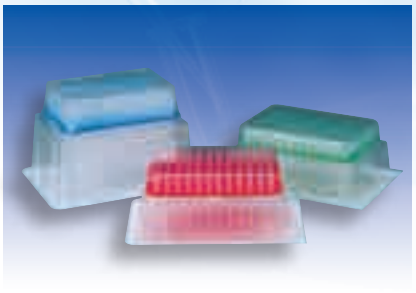
Extended-length Tips

Cat. No.	Description	Maximum Capacity	Fits LTS Pipette	Type
RT-L250X	768 tips in 8 racks	200 µl	50,100, 200	
RT-L250XS	768 tips in 8 racks	200 µl	50,100, 200	Presterilized, ext length
RT-L200XF	768 tips in 8 racks	200 µl	50,100, 200	Filter, presterilized, ext length
RT-L1000X	768 tips in 8 racks	1200 µl	1000, 1200	
RT-L1000XS	768 tips in 8 racks	1200 µl	1000, 1200	Presterilized, ext length
RT-L1000XF	768 tips in 8 racks	1200 µl	1000, 1200	Filter, presterilized, ext length

Tips listed on these pages may be mixed or combined with all other Rainin tips to qualify for discount per shipment.

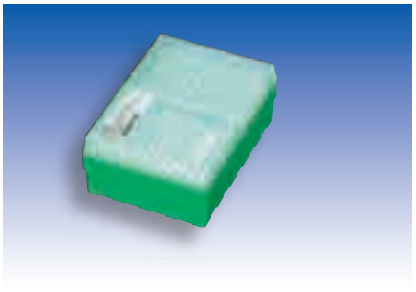
Green-Pak

Cat. No.	Description	Maximum Capacity	Fits LTS Pipette	Type
GP-L10	960 tips in 10 refills	20 µl	2, 10, 20	
GP-L10S	960 tips in 10 refills	20 µl	2, 10, 20	Presterilized
GP-L10F	960 tips in 10 refills	20 µl	2, 10, 20	Filter, presterilized
GP-L250	960 tips in 10 refills	200 µl	50,100, 200	
GP-L250S	960 tips in 10 refills	200 µl	50,100, 200	Presterilized
GP-L200F	960 tips in 10 refills	200 µl	50,100, 200	Filter, presterilized
GP-L1000	768 tips in 8 refills	1000 µl	1000	
GP-L1000S	768 tips in 8 refills	1000 µl	1000	Presterilized
GP-L1000F	768 tips in 8 refills	1000 µl	1000	Filter, presterilized
GPR-L10	Empty racks/lids for any GP/GPS 10 µl refills, red, package of 10			
GPR-L250	Empty racks/lids for any GP/GPS 250 µl refills, green, package of 10			
GPR-L1000	Empty racks/lids for any GP/GPS 1000 µl refills, blue, package of 8			



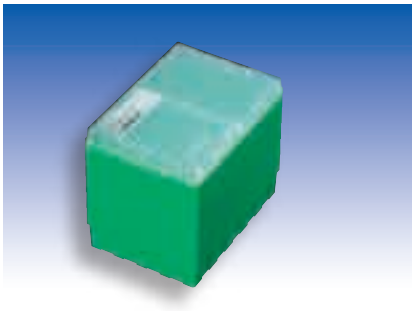
StableRak double-96-format **individual** racks

Cat. No.	Description	Maximum Capacity	Fits LTS Pipette	Type
SR-L10	960 tips in 5 racks	20 µl	2, 10, 20	
SR-L10S	960 tips in 5 racks	20 µl	2, 10, 20	Presterilized
SR-L10F	960 tips in 5 racks	20 µl	2, 10, 20	Filter, presterilized
SR-L250	960 tips in 5 racks	200 µl	50,100, 200	
SR-L250S	960 tips in 5 racks	200 µl	50,100, 200	Presterilized
SR-L200F	960 tips in 5 racks	200 µl	50,100, 200	Filter, presterilized
SR-L300	768 tips in 4 racks	300 µl	300	
SR-L300S	768 tips in 4 racks	300 µl	300	Presterilized
SR-L300F	768 tips in 4 racks	300 µl	300	Filter, presterilized
SR-L1000	768 tips in 4 racks	1000 µl	1000	
SR-L1000S	768 tips in 4 racks	1000 µl	1000	Presterilized
SR-L1000F	768 tips in 4 racks	1000 µl	1000	Filter, presterilized
SR-L1200	768 tips in 4 racks	1200 µl	1200, 1000	
SR-L1200S	768 tips in 4 racks	1200 µl	1200, 1000	Presterilized
SR-L1200F	768 tips in 4 racks	1200 µl	1200, 1000	Filter, presterilized



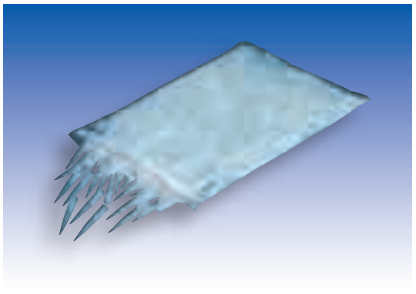
StableStak double-96-format **stacked** racks

Cat. No.	Description	Maximum Capacity	Fits LTS Pipette	Type
SS-L10	960 tips in 5 layers	20 µl	2, 10, 20	
SS-L10S	960 tips in 5 layers	20 µl	2, 10, 20	Presterilized
SS-L250	960 tips in 5 layers	200 µl	50,100, 200	
SS-L250S	960 tips in 5 layers	200 µl	50,100, 200	Presterilized
SS-L300	768 tips in 4 layers	300 µl	300	
SS-L300S	768 tips in 4 layers	300 µl	300	Presterilized
SS-L1000	768 tips in 4 layers	1000 µl	1000	
SS-L1000S	768 tips in 4 layers	1000 µl	1000	Presterilized



Bulk Tips

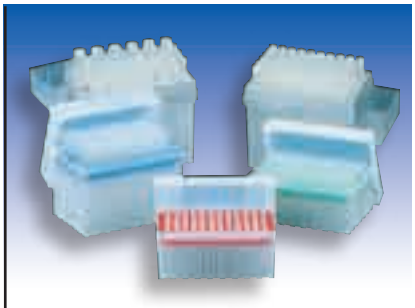
Cat. No.	Description	Maximum Capacity	Fits LTS Pipette	Type
RC-L10	1000 tips in bags	20 µl	2, 10, 20	
RC-L250	1000 tips in bags	200 µl	50,100, 200	
RC-L300	1000 tips in bags	300 µl	300	
RC-L1000	1000 tips in bags	1000 µl	1000	
RC-L1200	1000 tips in bags	1200 µl	1200,1000	
RC-L2000	1000 tips in bags	2000 µl	2000 µl	
RC-L5000	1000 tips in bags	5000 µl	5000 µl	
RC-L10ML	200 tips in bags	10 ml	10 ml	
RC-L10MLS	75 tips individ. wrapped	10 ml	10 ml	
RC-L20ML	100 tips in bags	20 ml	20 ml	
RC-L20MLS	50 tips individ. wrapped	20 ml	20 ml	

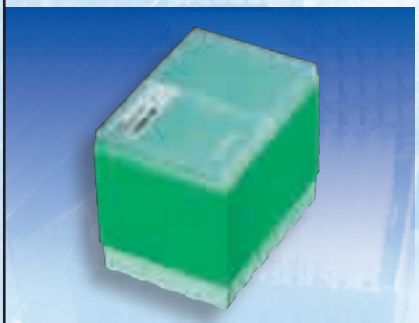


bioclean™

Traditional Conical Tips

for RAININ® and other pipettes with traditional conical shafts





Removable-Cover Racks

Cat. No.	Description	Maximum Capacity	Fits Traditional Pipette Model	Type
RT-10	960 tips in 10 racks	10 µl	2, 10	
RT-10S	960 tips in 10 racks	10 µl	2, 10	Presterilized
RT-10F	960 tips in 10 racks	10 µl	2, 10	Filter, presterilized
RT-10G	960 tips in 10 racks	10 µl	2, 10	ShaftGard
RT-10GS	960 tips in 10 racks	10 µl	2, 10	ShaftGard / Presterilized
RT-10GF	960 tips in 10 racks	10 µl	2, 10	ShaftGard / Filter
RT-20F	960 tips in 10 racks	30 µl	20, 25	Filter, presterilized
RT-100F	960 tips in 10 racks	100 µl	100	Filter, presterilized
RT-250	960 tips in 10 racks	250 µl	20, 25, 100, 200, 250	
RT-250S	960 tips in 10 racks	250 µl	20, 25, 100, 200, 250	Presterilized
RT-200F	960 tips in 10 racks	200 µl	200, 250	Filter, presterilized
RT-1000	768 tips in 8 racks	1000 µl	1000	
RT-1000S	768 tips in 8 racks	1000 µl	1000	Presterilized
RT-1000F	768 tips in 8 racks	1000 µl	1000	Filter, presterilized
RT-2000	480 tips in 8 racks	2000 µl	2000, 2500 µl	
RT-2000S	480 tips in 8 racks	2000 µl	2000, 2500 µl	Presterilized
RT-2000F	480 tips in 8 racks	2000 µl	2000, 2500 µl	Filter, presterilized
RT-5000	192 tips in 8 racks	5000 µl	5000 µl	
RT-5000S	192 tips in 8 racks	5000 µl	5000 µl	Presterilized

Green-Pak SpaceSaver

Cat. No.	Description	Maximum Capacity	Fits Traditional Pipette Model	Type
GPS-10G	960 tips in 10 refills	10 µl	2, 10	ShaftGard
GPS-10GS	960 tips in 10 refills	10 µl	2, 10	ShaftGard / Presterilized
GPS-250	960 tips in 10 refills	250 µl	20, 25, 100, 200, 250	
GPS-250S	960 tips in 10 refills	250 µl	20, 25, 100, 200, 250	Presterilized
GPS-1000	768 tips in 8 refills	1000 µl	1000	
GPS-1000S	768 tips in 8 refills	1000 µl	1000	Presterilized

Green-Pak

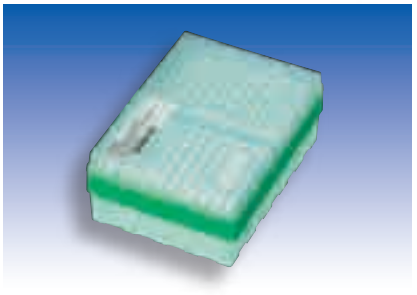
Cat. No.	Description	Maximum Capacity	Fits Traditional Pipette Model	Type
GP-10	960 tips in 10 refills	10 µl	2, 10	
GP-10S	960 tips in 10 refills	10 µl	2, 10	Presterilized
GP-10F	960 tips in 10 refills	10 µl	2, 10	Filter, presterilized
GP-10G	960 tips in 10 refills	10 µl	2, 10	ShaftGard
GP-10GS	960 tips in 10 refills	10 µl	2, 10	ShaftGard / Presterilized
GP-10GF	960 tips in 10 refills	10 µl	2, 10	ShaftGard / Filter
GP-20F	960 tips in 10 refills	30 µl	20, 25	Filter, presterilized
GP-100F	960 tips in 10 refills	100 µl	100	Filter, presterilized
GP-250	960 tips in 10 refills	250 µl	20, 25, 100, 200, 250	
GP-250S	960 tips in 10 refills	250 µl	20, 25, 100, 200, 250	Presterilized
GP-200F	960 tips in 10 refills	200 µl	200, 250	Filter, presterilized
GP-1000	768 tips in 8 refills	1000 µl	1000	
GP-1000S	768 tips in 8 refills	1000 µl	1000	Presterilized
GP-1000F	768 tips in 8 refills	1000 µl	1000	Filter, presterilized
GPR-10	Empty racks/ lids for GP-10 products, Purple, pkg of 10			
GPR-10G	Empty racks/ lids for GP-10G, GPS-10G products, Red, pkg of 10, ShaftGard			
GPR-250	Empty racks/ lids for GP-250, GPS-250 products, Green, pkg of 10			
GPR-1000	Empty racks/ lids for GP-1000, GPS-1000 products, Blue, pkg of8			

StableStak

Cat. No.	Description	Maximum Capacity	Fits Traditional Pipette Model	Type
SS-250	960 tips in 5 layers	250 µl	20, 25, 100, 200, 250	
SS-250S	960 tips in 5 layers	250 µl	20, 25, 100, 200, 250	
SS-300	768 tips in 4 layers	300 µl	300	
SS-300S	768 tips in 4 layers	300 µl	300	Presterilized
SS-1000	768 tips in 4 layers	1000 µl	1000	
SS-1000S	768 tips in 4 layers	1000 µl	1000	Presterilized

StableRak

Cat. No.	Description	Maximum Capacity	Fits Traditional Pipette Model	Type
SR-20F	960 tips in 5 racks	30 µl	20, 25	Filter, presterilized
SR-100F	960 tips in 5 racks	100 µl	100	Filter, presterilized
SR-250	960 tips in 5 racks	250 µl	20, 25, 100, 200, 250	
SR-250S	960 tips in 5 racks	250 µL	20, 25, 100, 200, 250	Presterilized
SR-200F	960 tips in 5 racks	200 µl	200	Filter, presterilized
SR-300	768 tips in 4 racks	300 µl	300	
SR-300S	768 tips in 4 racks	300 µl	300	Presterilized
SR-300F	768 tips in 4 racks	300 µl	300	Filter, presterilized
SR-1000	768 tips in 4 racks	1000 µl	1000	
SR-1000S	768 tips in 4 racks	1000 µl	1000	Presterilized
SR-1000F	768 tips in 4 racks	1000 µl	1000	Filter, presterilized



Hinged-Cover Racks and Refills

Cat. No.	Description	Maximum Capacity	Fits Traditional Pipette Model	Type
HR-20F	960 tips in 10 racks	30 µl	20, 25	Filter, presterilized
HR-100F	960 tips in 10 racks	100 µl	100	Filter, presterilized
HR-250	960 tips in 10 racks	250 µl	20, 25, 100, 200, 250	
HR-250S	960 tips in 10 racks	250 µl	20, 25, 100, 200, 250	Presterilized
HR-200F	960 tips in 10 racks	200 µl	200, 250	Filter, presterilized
HR-1000	1000 tips in 10 racks	1000 µl	1000	
HR-1000S	1000 tips in 10 racks	1000 µl	1000	Presterilized
HR-1000F	1000 tips in 10 racks	1000 µl	1000	Filter, presterilized
RR-250	960 tips in 10 refills	250 µl	20, 25, 100, 200, 250	
RR-1000	1000 tips in 10 refills	1000 µl	1000	

Speciality Tips

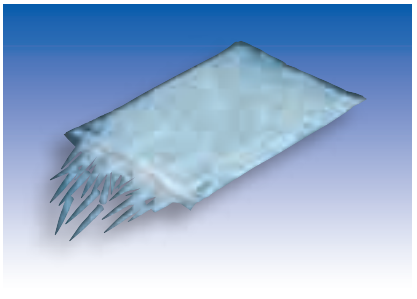
Cat. No.	Description	Maximum Capacity	Fits Traditional Pipette Model	Type
GT-10-2	200 tips in 1 rack	10 µl	2, 10	Gel-Well, 0.17 mm
GT-10-4	200 tips in 1 rack	10 µl	2, 10	Gel-Well, 0.37 mm
GT-10-6	200 tips in 1 rack	10 µl	2, 10	Gel-Well, 0.57 mm
GT-060	480 tips in 5 racks	250 µl	20, 25, 100, 200, 250	Gel-Well, 0.60 mm
GT-250-2	200 tips in 1 rack	250 µl	20, 25, 100, 200, 250	Gel-Well, 0.17 mm
GT-250-4	200 tips in 1 rack	250 µl	20, 25, 100, 200, 250	Gel-Well, 0.37 mm
GT-250-6	200 tips in 1 rack	250 µl	20, 25, 100, 200, 250	Gel-Well, 0.57 mm
RC-250W	1000 tips in bags	250 µl	20, 25, 100, 200, 250	Wide-orifice
HR-250W	960 tips in 10 racks	250 µl	20, 25, 100, 200, 250	Wide-orifice
HR-250WS	960 tips in 10 racks	250 µl	20, 25, 100, 200, 250	Wide-orifice / Presterilized
HR-1000W	1000 tips in 10 racks	1000 µl	1000	Wide-orifice
HR-1000WS	1000 tips in 10 racks	1000 µl	1000	Wide-orifice / Presterilized

Classic Racks (not refillable)

Cat. No.	Description	Maximum Capacity	Fits Traditional Pipette Model	Type
RT-20	1000 tips in 10 racks	250 µl	20, 25, 100, 200, 250	
RT-20S	1000 tips in 10 racks	250 µl	20, 25, 100, 200, 250	Presterilized
RT-200	1000 tips in 10 racks	1000 µl	1000	
RT-200S	1000 tips in 10 racks	1000 µl	1000	Presterilized
RT-200F3	1000 tips in 10 racks	1000 µl	1000	Filter, presterilized

Bulk Tips

Cat. No.	Description	Maximum Capacity	Fits Traditional Pipette Model	Type
RC-10	1000 tips in bags	10 µl	2, 10	
RC-10G	1000 tips in bags	10 µl	2, 10	ShaftGard
RC-250	1000 tips in bags	250 µl	20, 25, 100, 200, 250	
RC-200	1000 tips in bags	1000 µl	1000	Non-finepoint
RC-1000	1000 tips in bags	1000 µl	1000	
RC-2000	1000 tips in bags	2000 µl	2000, 2500 µl	
RC-2500	1000 tips in bags	2500 µl	2500 µl	
RC-5000	1000 tips in bags	5000 µl	5000 µl	
RC-10ML	200 tips in bags	10 ml	10 ml	
RC-10MLS	75 tips individ. wrapped	10 ml	10 ml	



Pos-D™ Positive Displacement Pipette

A pipette with ergonomic benefits

- **Absolutely eliminates cross-contamination**
- **Ideal for pipetting with "problem" liquids (e.g., dense, viscous, volatile)**
- **Six volume ranges from 0.5 to 1000 µl**

Ergonomic design for comfortable and productive pipetting

Larger more ergonomic handle:
Pos-D has a natural feel and fits comfortably in your hand.

Hand-friendly fingerhook:
No need to grip! Pos-D rests in your hand while you work.

Volume setting visible during pipetting:
The display faces you, so there's no need to twist the pipette and your wrist to set or read volume.

Reliable pipetting of problem samples
Pos-D is much better than air-displacement pipettes for samples with high density, viscosities, or vapor pressures. Inside the capillary, the piston makes direct contact with the sample.

The positive wiping action of the piston against the capillary wall assures complete dispensing of these problem samples without residual droplets.

Positive Displacement eliminates aerosol contamination
No air between the liquid sample and the piston prevents formation of aerosols and protects samples from instrument contamination.

Pos-D™ Capillaries and Pistons

Presterilized, preassembled in racks

- **No need to stock both presterilized and non-sterilized products**
- **All capillaries/pistons presterilized – about the same price as non-sterilized**
- **For use with Pos-D and Microman® pipettes**

Capillaries and pistons prevent sample carryover
Disposable capillaries and pistons provide absolute protection against crosscontamination.

Presterilized by e-beam radiation
Get the security of pre-sterilized capillaries and pistons for almost the same price or less than non-sterile.

Easy to pick up and eject
Capillaries and pistons are preassembled and racked by a robotic process, eliminating human contact. Simple to pick up and eject.

Pos-D™ pipettes

Cat.-No.	Volume Range
MR-10	0.5–10 µl
MR-25	3–25 µl
MR-50	20–50 µl
MR-100	10–100 µl
MR-250	50–250 µl
MR-1000	100–1000 µl

Capillaries and Pistons

Cat.-No.	Quantity
C-10	3 racks of 60 each, presterilized
C-25	3 racks of 60 each, presterilized
C-50	3 racks of 60 each, presterilized
C-100	3 racks of 60 each, presterilized
C-250	3 racks of 60 each, presterilized
C-1000	3 racks of 60 each, presterilized

Pipet-Plus®

A manual pipette with the advantages of an electronic pipette

- **Magnetic latch with trigger release**
- **Variable aspiration rate controller**
- **No heavy blowout springs**

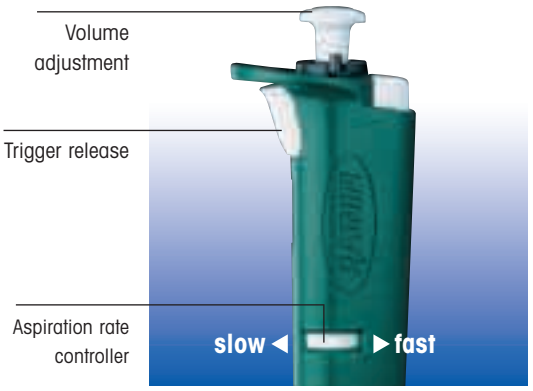
What is Latch-Mode pipetting?
Pipet-Plus incorporates a patented, variable speed Aspiration Rate Controller in conjunction with a magnetic latch and trigger-release mechanism to provide consistently greater precision, user-to-user and sample-to-sample.

Magnetic latch with trigger release
The magnetic latch mechanism holds the plunger in the down position, ready for sample pick-up at the end of each pipetting cycle. No need to exert continued thumb pressure or feel for the first stop. Simply immerse the tip into the sample and gently pull the trigger.

Aspiration rate controller
An adjustable valve controls the uptake speed of the sample. You select the aspiration speed: fast for aqueous samples, slow for viscous samples, reduced shear and sensitive solutions.

Improves performance
With Pipet-Plus, pipetting is more reproducible and less dependent on user technique. The latch holds the piston in the down position so you can concentrate on placing the tip at the correct depth in the sample.

Prevents splash, reduces repairs
Controlled aspiration rate improves pipetting consistency and prevents sample splash which could lead to internal contamination. Costly seal and piston replacements are reduced.



A new way of pipetting
2 steps instead of 5 – less repetitive motion

Step 2
Push button
to dispense

Step 1
Pull trigger
to aspirate

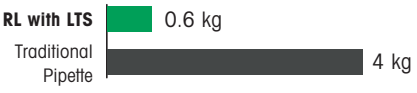
Compare to
Traditional pipettes
Step 1: Depress & Hold
Step 2: Aspirate
Step 3: Dispense
Step 4: Blowout
Step 5: Return

Reduces repetitive motion and stress
Pipet-Plus eliminates over half of the repetitive piston strokes – significantly reducing hand fatigue and risk of repetitive strain injuries.

No heavy blowout spring
To dispense, fully depress the plunger button through blowout. The spring force in Pipet-Plus is extremely light compared to the heavy blowout spring necessary in traditional pipettes.

80% Force Reduction

Pipet-Plus force reduction with LTS...
Tip ejection and plunger forces eliminated by 80%



Ordering Information

Pipet-Plus with LTS cylindrical shaft

Cat. No.	Volume Range
RL-2	0.1–2 µl
RL-10	0.5–10 µl
RL-20	2–20 µl
RL-100	10–100 µl
RL-200	20–200 µl
RL-300	20–300 µl
RL-1000	100-1000 µl
RL-2000	200-2000 µl
RL-5000	500-5000 µl
RL-10ML	1000 µl–10 ml

RAININ LTS tips must be used with LTS pipettes.

AutoRep™ E

Adjustable Electronic Repeating Pipette

- **Adjustable from 1 µl to 50 ml**
- **Microprocessor-controlled; trigger activated**
- **Comfortable, lightweight**

AutoRep M2
Manual Dispenser

Reduces repetitive strain injuries
AutoRep™ E virtually eliminates all forces that contribute to repetitive strain injuries often experienced in multidispense pipetting.

Three modes for flexibility
Dispensing for multidispensing; a step counter displays each volume selected. No more time wasted calculating and converting!
Auto-Dispensing learns the average time interval between your first three dispensing steps then automatically continues at this same pace. No time–interval programming required.
Pipetting use as a positive-displacement pipette.

Rechargeable battery eliminates downtime
The recharging base will fully charge the AutoRep™ E in only 2.5 hours, or the battery alone in 3.5 hours. The no memory, no maintenance NiMH battery pack may be charged in the same base while another pack is used.

Ordering Information
AutoRep™ Electronic and Manual

Cat. No.	Description
AR-E1	AutoRep E
AR-BA	Extra NIMH Battery Pack
AR-M2	AutoRep M

Includes battery pack, recharging base, AC adapter, one each Encode Syringe Tip: 0.5,1.25,2.5,5,12.5ml

For complete details about AutoRep M, see www.rainin.com.

Ordering Information
Encode™ Syringe Tips

Cat. No.	Maximum capacity	Quantity	Type
ENC-100	0.1ml	100	
ENC-100S	0.1ml	100	Sterile
ENC-500	0.5 ml	100	
ENC-500S	0.5 ml	100	Sterile
ENC-1250	1.25 ml	100	
ENC-1250S	1.25 ml	100	Sterile
ENC-2500	2.5 ml	100	
ENC-2500S	2.5 ml	100	Sterile
ENC-5MI	5 ml	100	
ENC-5MIS	5 ml	100	Sterile
ENC-12MI	12.5 ml	100	
ENC-12MIS	12.5 ml	100	Sterile
ENC-25MI	25 ml*	50	
ENC-25MIS	25 ml*	25	Sterile
ENC-50MI	50 ml*	25	
ENC-50MIS	50 ml*	25	Sterile

ENC-SET Encode Tip Set, Non-sterile, 20 each: 0.5, 1.25, 2.5, 5, 12.5 ml
ENC-10ADP Adapter for 25 ml and 50 ml, Non-sterile, 10/pkg
ENC-ADPS Adapter for 25 ml and 50 ml, Sterile, individually-wrapped, 5/pkg

*Includes one adapter. Sterile syringe tips are endotoxin-free, individually wrapped.
Catalog numbers can be combined for discount.

Encode syringe tips for AutoRep E and AutoRep M.
Encode syringes automatically display tip volume on AutoRep E.

GlassMaster™

Pipet Controller

Weighs only 180 grams
GlassMaster is the lightest pipet controller available. The pistol-grip shape holds the pipet for use in a laminar flow or biological safety cabinet. Suitable for all types of disposable pipets from 1 to 100 ml.

Protection from aerosols
Supplied with 0.45 and 0.2 µm hydrophobic filters for protection against contamination during aspiration and accidental entry of liquids into the mechanism.

3 speeds for precise control
Three aspirate and dispense speeds with two finger triggers.

Portable 8-hour operation
GlassMaster will operate under normal conditions for approximately eight hours after recharging.
A low-charge indicator light signals when there is one hour's use remaining. Can be used while re-charging.

GlassMate™ Pipet Filler

Offers superior pipetting control to both left or right-handed users. The silicone bulb and thumb lever control both aspiration and dispensing, with a mini-squeeze bulb for blowout pipets. Supplied with integral 0.45 µm filter and colored pipet cones for coding in white, mint, lilac, pink. Suitable for all types of pipets from 1 ml to 100 ml.

GlassMaster Turbo

Faster filling and dispensing when using 25, 50, and 100 ml pipets. Accepts all GlassMaster accessories and filters.

Ordering Information

Cat. No.	Description
GM-100	GlassMaster (1–100 ml)
GM-200	GlassMaster Turbo (25–100 ml)
GMT-100	GlassMate Pipet Filler (1–100 ml), incl. 4 cones
GM-045	Filter Set, 0.45 µm, Blue, 5/pkg
GM-020	Filter Set, 0.2 µm, Clear 5/pkg
GM-PH	Silicone Pipet Holder
GM-NC	Nose Cone
GM-NCY	Nose Cone for Turbo (yellow)
GM-B	Replacement Battery for GlassMaster, 2 each

GlassMaster is supplied with a bench stand, spare hydrophobic filters and charging unit.

Serological pipets available online: www.rainin.com

RP-1™ Digital Peristaltic Pump

- **Precise, steady flow rates**
- **Pressures up to 4.6 bar**
- **Pulsation minimized**

Independent channel adjustment

Install tubing without interruption

Stepper-motor technology
The heart of the RP-1 is a high-torque electronically controlled stepper motor. Coupled directly to the motor, the pump head rotates at a continuously adjustable speed between 0.01 rpm and 48 rpm, in either direction.

10 stainless steel rollers minimize pulsation
Ten precision stainless steel rollers provide higher pressures with minimal pulsation – five rollers are always in contact with the tubing, compressing the tubing and minimizing pulsation at pressures up to 4.6 bar.

Tubing compression adjustment reduces wear
A thumbscrew on each channel moves a cam, which compresses an arm onto the tubing. This provides extremely fine adjustment and greatly reduces tubing wear and failure. Adjustments are made independently for individual channels – different diameters of tubing can be used on each channel. Tubing can be installed without stopping the pump.

Versatile laboratory workhorse

1, 2, 4, or 8-channel interchangeable heads

Interchangeable pump heads with one, two, four, or eight channels can be installed in less than a minute. PVC, Silicone, or Viton® tubing with diameters from 0.25 mm ID to 4 mm ID can be used to produce precise flow rates from 0.5 µl/minute to more than 25 ml/minute at the fastest speed.

RP-1 Peristaltic Pump used in a low-pressure chromatography application

Interchangeable heads

Ordering Information RP-1 Pump

Cat. No.	Description
7103-051	Single-Channel Pump, Complete
7103-052	Two-Channel Pump, Complete
7103-054	Four-Channel Pump, Complete
7103-058	Eight-Channel Pump, Complete
7103-061	Single-Channel Head
7103-062	Two-Channel Head
7103-064	Four-Channel Head
7103-068	Eight-Channel Head
7103-050	Drive Module Only

Supplied with sample tubing
(1 each 39-621, 39-625, 39-628).

Ordering Information Tubing

Cat. No	ID (mm)	Max Flow (ml/min)	Color Code
Silicone: (14 inches long) Pkg of 6			
39-660	0.25	0.26	Orange/Blue
39-661	0.38	0.60	Orange/Green
39-662	0.50	0.95	Orange/Yellow
39-663	0.63	1.5	Orange/White
39-664	0.76	2.0	Black
39-665	1.52	7.4	Yellow/Blue
39-666	2.29	15.4	Purple/Black
39-667	2.80	20.6	Purple/White
Polyvinyl Chloride: (14 inches long) Pkg of 12			
39-620	0.25	0.33	Orange/Blue
39-621	0.38	0.66	Orange/Green
39-622	0.50	1.13	Orange/Yellow
39-623	0.63	1.6	Orange/White
39-624	0.76	2.2	Black
39-625	1.52	8.3	Yellow/Blue
39-626	2.29	17.2	Purple/Black
39-627	2.80	24.6	Purple/White
39-628	3.16	28.2	Black/White

RAININ Service Programs

Pipette Calibration and Preventive Maintenance

Highest capacity with ISO 17025 credibility

- **On- and off-site service programs**
- **Most comprehensive preventive maintenance plan available**
- **Available for RAININ, Pipetman and other popular brand pipettes**

RAININ uses high precision 6 - and 7-place METTLER TOLEDO balances to properly measure ultramicro pipettes

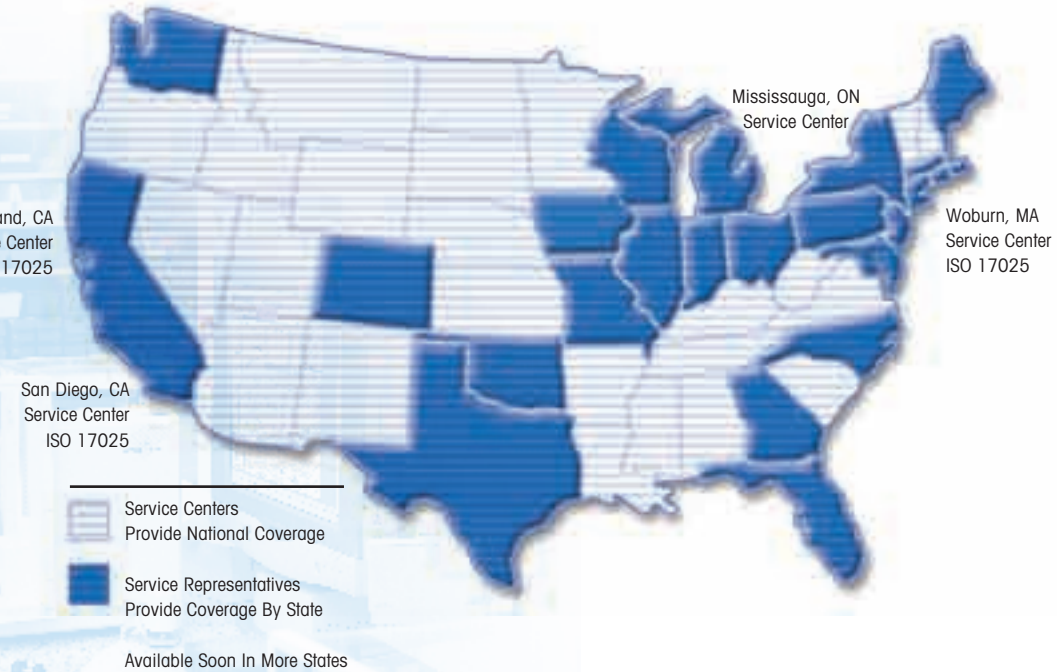
RAININ created specialized equipment and techniques to assure highest data integrity

Experienced and Qualified
For over 35 years, RAININ was the only authorized service and parts provider for Pipetman and RAININ pipettes in the United States. RAININ technicians are qualified specialists, having completed extensive training in all aspects of pipette service and operation of Pipetman, RAININ and other popular brand pipettes

ISO 17025 accredited by NVLAP
Based on rigorous documentation, extensive training, and long-term proficiency testing, two of RAININ`s Service Centers have achieved the highest level of calibration competency and data integrity when using the gravimetric method. Isn't it comforting to know that NVLAP auditors have ensured the highest calibration standards are being met, so you don't have to?

Three Service Centers ensure 48 hour turnaround
RAININ has three Service Centers that are open from 7am – 11pm.
Fully-staffed by highly-qualified Service Technicians, you can rest assured that your pipettes will be serviced quickly and professionally.

On-site Service Representatives
RAININ has extensively-trained Field Service Representatives at each of the major life research centers in the United States – fully equipped with computers, barcode scanners, label makers, specialty testing equipment and immediate hard-copy reporting capabilities. You could not ask for a more professional team to take care of your pipettes – right in the convenience of your lab!



Most comprehensive preventive maintenance

Nothing lasts forever
A pipette comprises a variety of mechanical parts. Like all things mechanical, nothing lasts forever. For example, piston surfaces can deteriorate over time, leading to premature seal failure and pipette inaccuracy.
Seals can leak after being exposed to damaging piston surfaces or sample contamination. Shaft ends can be worn over time, especially when high force or "banging" is applied when mounting tips. Often, this leakage is gradual and may not be discovered until it is too late, adversely affecting the integrity of your research.

Sealing system wear is predictable and preventable
95% of all pipette failure relates to sealing system wear. Under normal use and based on our extensive experience, seals should be replaced at least once per year, while shafts and pistons should be replaced every 3-5 years.
Failure rates can be significantly reduced if scheduled preventive maintenance is utilized.

Preventive Maintenance reduces failures and is cost-effective
RAININ's preventive maintenance program is designed to prevent "as found" failure between calibration intervals. With PM parts included, it is your most cost-effective way to maintain your pipettes. And in comparison to other service providers, it is the most comprehensive and affordable plan available, too.

Typical "As Found" Failure Rates
As a population, pipettes checked annually without preventive maintenance will have a 20% or more failure rate.

Failure Rate by Component
Over 95% of pipette failure is attributable to sealing system defects. This is predictable and preventable.

RAININ's Preventive Maintenance Schedule

	1st Visit			Every Visit		Every 3 Years		
	Replace/ Re-lube Seal	Replace Shaft	Replace Piston1	Replace/ Re-lube Seal	Clean & Inspect Piston	Replace Shaft	Replace Piston1	Cost of PM parts & Labor
Single-channel								
RAININ® LTS	•	•	•	•	•	•	•	
RAININ® Traditional	•	•	•	•	•	•	•	
Pipetman®	•	•	•	•	•	•	•	
Eppendorf 1	•			•	•			**PM Parts & Labor included in cost of Plan**
Finn (Labsystems)1	•			•	•			
Multichannel One 1,5								
RAININ® LTS	•	•	•	•	•	•	•	
RAININ® Traditional	•	•	•	•	•	•	•	
P / PR-200-M8	•	•	•	•	•	•	•	
Multichannel All 1,5								
RAININ® LTS	•	•	•	•	•	•	•	
RAININ® Traditional	•	•	•	•	•	•	•	
P / PR-200-M8	•	•	•	•	•	•	•	
Eppendorf 2,3	•			•	•			
Finn (Labsystems)4	•			•	•			

1. Available at Service Centers only.
2. Eight- and twelve-channel Research and Research Pro.
3. Includes new nozzle o-ring 1st visit and every 3 years.
4. Eight- and twelve-channel Digital MCP, Colour, and BioControl.
5. Shaft and piston replaced as needed.

Calibration PM℠ pipette calibration,

All pipettes entering Calibration PM receive these valuable services

Qualified technicians recalibrate pipettes to original manufacturer specifications

Each pipette is air-pressure checked for seal integrity

Labels provide a seal of approval with next due-date indicated

1 **As Found Data**[1,3] – Gravimetric evaluation to original manufacturer specifications
2 **Inspection** – Thorough internal & external inspection
3 **Sealing System** – Visual & pressurized leak test
4 **Preventive Maintenance**[2] – Seals, shafts and piston replacement free
5 **Service** – Cleaning, repair and adjustment (as needed)
6 **As Returned Data**[3] – Gravimetric evaluation to original manufacturer specifications
7 **Documentation** – Pipette label, Calibration Certificate, 5 year retention
8 **Reminder Notice** – 30 day reminder before "next due date"
9 **Turnaround** – 48 hours in facility; 72 hours for Multichannel All

Special Handling for Multichannel Pipettes

You have two options:

Multichannel One℠
This plan gravimetrically evaluates one channel, just like a single-channel pipette. Each remaining channel is checked with one weighing at nominal volume. Results are stated on the Calibration Certificate.

Multichannel All℠
This plan gravimetrically evaluates every channel of the multichannel pipette, not just one. So whether you have an 8-, 12-, 16- or 24-channel, you will get complete data as if they were all separate pipettes. Preventive maintenance is provided not only for RAININ and Gilson pipettes, but other popular multichannel brands, too. Multichannel All is your best choice when you need the highest level of confidence and reliability.

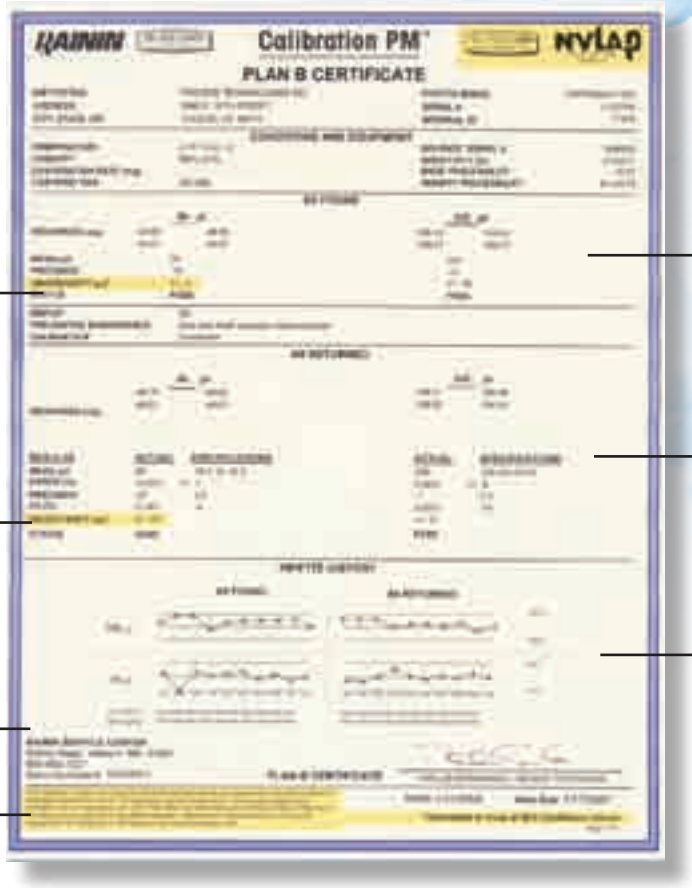
ISO 17025 Certificates available
You can choose ISO 17025 documentation for any plan. You will receive additional information on your Calibration Certificate including the name of our underwriter, NVLAP, statement of measurement uncertainty per volume setting, and application notes. Whether or not you choose this option, each RAININ Service Center complies with all quality standards as set forth by ISO guidelines and NVLAP interpretation, assuring you the highest level of calibration competency.

Choice of two Calibration PM Plans:
Plan A: as returned data, satisfies most QC SOPs
Plan B: as found, as returned data, for more stringent QC SOP

1. Not offered with Plan A
2. See previous page for details
3. For Multichannel All Plan only: volume settings below 10 µL may not be at manufacturer specifications.

Documentation and preventive maintenance

Calibration Certificate with ISO 17025 Option



ISO 17025 Information

ISO 17025 Information

"As Found" history of performance from current and previous visits. Useful for determining individual pipette reliability and calibration interval frequency

ISO 17025 Information

Pipette performance as received from your facility

Pipette performance as returned from Service Center

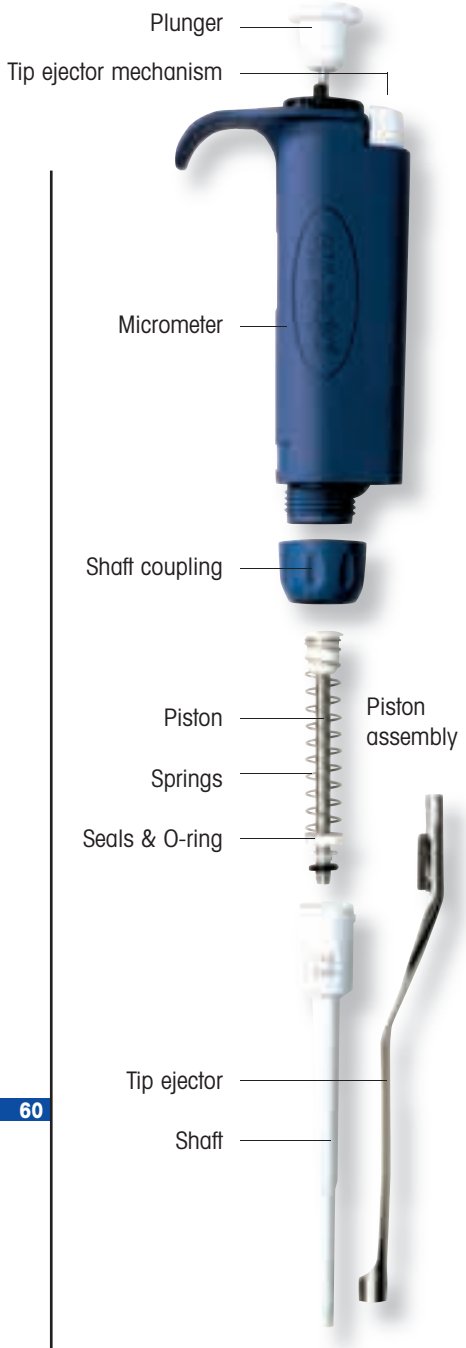
"As Returned" history of performance from current and previous visits

PIPETTE TYPE	PLAN (Volume settings X # of weighings X # of channels)	AS FOUND	AS RETURNED	Cat. No. when ordered with pipettes
Single-channel	A	N/A	2 x 4	CPA-CERT
	B	2 x 4	2 x 4	CPB-CERT
	B with EMO	3 x 4	3 x 10	CPE-CERT
Multichannel One℠	A	N/A	2 x 4 x 1 (1 x 1 remaining channels)	CPA-CERT-MO
	B	2 x 4 x 1	2 x 4 x 1 (1 x 1 remaining channels)	CPB-CERT-MO
	B with EMO**	3 x 4 x 1	3 x 10 x 1 (1 x 1 remaining channels)	CPE-CERT-MO
Multichannel All℠				
8-channel	A	N/A	2 x 4 x 8	M8-CERT-A
12-channel		N/A	2 x 4 x 12	M12-CERT-A
8-channel	B	2 x 4 x 8	2 x 4 x 8	M8-CERT-B
12-channel		2 x 4 x 12	2 x 4 x 12	M12-CERT-B
8-channel	B with EMO	2 x 4 x 8	2 x 10 x 8	M8-CERT-E
12-channel		2 x 4 x 12	2 x 10 x 12	M12-CERT-E
8-channel	P: Same as B w/EMO	3 x 4 x 8	3 x 10 x 8	M8-CERT-EP
12-channel	but with 3 volumes	3 x 4 x 12	3 x 10 x 12	M12-CERT-EP

EMO = Extended Measurement Option P = Plus Plan
*Includes PM parts and labor **Also includes 1-2 weighings per nominal volume for "as found" and "as returned".
Additional charges: If incoming pipettes fail functional inspection for reasons not covered under preventive maintenance, repairs will be made for additional charge for labor and parts.
ISO 17025 Compliant certificates available. NVLAP is a federally registered certification mark of the National Institute of Standards and Technology (NIST).

To enroll: Call 800-543-4030 (8am – 8pm ET)
Return forms, free return kits and sample certificates available at www.rainin.com

OnSite Service[SM]



Barcode labels attached to pipettes provide useful information for maintaining and identifying your pipettes

Preventive Maintenance and Repair done right in your lab

RAININ's OnSite Service program is a convenient and cost-effective way to maintain your pipettes performance and reliability. RAININ Service representatives come prepared with computers, bar code scanners, label makers, and specialized testing equipment so you get the most professional service possible for your valuable pipettes.

12-point inspection

Each pipette is tested to determine working condition. This 12-point inspection includes thorough examination of the piston, shaft, seal assembly, plunger, tip ejector, micrometer and friction ring.

RAININ parts used exclusively

Field Service Representatives carry an exclusive and wide variety of RAININ parts for your Pipetman and RAININ pipettes to assure your pipette will work like new. Generic parts – commonly carried by other field service providers – are not allowed at Rainin.

Service Center still available

In the unlikely event that major repair or re-calibration is required, or when other manufacturers' pipettes need service, your OnSite Service Representative will send your pipettes at no charge to the nearest RAININ Service Center. Turnaround is only 48 hours in facility.

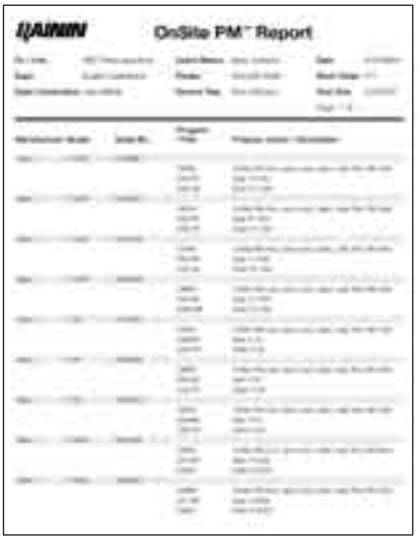
On-site Calibration?

RAININ and Pipetman calibration mechanisms have been permanently set

at the factory. Adjusting these settings without the proper controls and equipment will only harm the pipettes, not help.

RAININ does not offer on-site calibration because field calibration is unreliable and will de-rate your pipette's accuracy by a factor of 3 or more. Proper calibration requires 4-, 5-, 6- and 7-place balances in a controlled environment with specialized equipment – not readily available in most research facilities or by other service providers.

Computerized reports summarize work completed on each pipette



Choice of Two Plans

OnSite PM℠

- **Replaces critical liquid-end parts to prevent leakage between scheduled visits**
- **Provides higher assurance of pipette reliability**

Scheduled PM
Just like Calibration PM, OnSite PM offers scheduled preventive maintenance. Preventive maintenance helps prevent leakage before it occurs.

OnSite Documentation for GLP Programs
Thanks to our complete computerized system, you will receive immediate hard-copy quality reports and pipette labels on the day of your service. This documentation helps satisfy GLP guidelines.

- ✔ 12-Point inspection
- ✔ Pressure leak test
- ✔ Thorough pipette cleaning
- ✔ Minor repair
- ✔ Replace missing, broken, & worn parts
- ✔ Service reports, dated stickers

Plus...

- ✔ **Scheduled PM**
- ✔ **Free seal and shaft**

OnSite Repair℠

- **12-Point inspection identifies pipettes that are leaking or have other defects**
- **Repairs are made only for pipettes that fail**

Repairs only when needed
RAININ Service Representatives will repair and replace parts only when minor repair is required. Calibration is not affected when correcting minor problems.

Control your budget
With 12-point inspection and no "flat fees," you pay only for the parts and repairs required to return your pipettes to original working order.

- ✔ 12-Point inspection
- ✔ Pressure leak test
- ✔ Thorough pipette cleaning
- ✔ Minor repair
- ✔ Replace missing, broken, & worn parts
- ✔ Service reports, dated stickers

OnSite Service

OnSite PM	Labor and preventive maintenance parts. Includes inspection, cleaning, minor repair, new seal each visit, plus new shaft 1st visit and every 3 years. Additional parts are extra.
OnSite Repair	Labor. Includes inspection, cleaning, and minor repair. Parts used are extra.
Warranty	One year, parts and labor.

To enroll:

→ Go to www.rainin.com > GO to check availability in your area and to request an appointment

→ Call your local RAININ Service Representative to schedule OnSite Service in your lab at 800-828-2788

Quick Guide to RAININ® Manual Pipettes

FEATURES	Pipet-Lite	Pipet-Plus	RAININ Classic	Pos-D
Air-displacement	✔	✔	✔	–
Positive-displacement	–	–	–	✔
Repetitive dispenser	–	–	–	–
Continuously-adjustable	✔	✔	✔	✔
Uses LTS cylindrical tips	✔	✔	–	Capillaries/Pistons
Uses traditional conical tips	–	✔	✔	Capillaries/Pistons
Pipet force reduction w/ LTS	**70%**	**85%**	–	–
Volume range	0.1 µL-20 ml	0.1 µL-10 ml	0.1 µL-10 ml	0.5 µL-1 ml
Volume lock	✔	✔	–	–
Volume setting	Digital	Digital	Digital	Digital
Fingerhook	✔	–	✔	✔
Plunger aspiration	✔	–	✔	✔
Trigger aspiration	–	✔	–	–
Magnetic assist/latch	✔	✔	–	–
Aspiration rate controller	–	✔	–	–
Quick-release tip ejector	✔	✔	–	–
STANDS AVAILABLE				
HU-M3	✔	✔	✔	✔
HU-S3	✔	✔	✔	✔
CR-7	✔	✔	✔	✔
GR3	–	–	✔	✔

Quick Guide to RAININ® Electronic Pipettes

FEATURES	DESCRIPTION	EDP1	EDP3-Plus
Pipet	Transfers individual liquid samples	✔	✔
Multidispense	Transfers equal, multiple aliquots from a single volume	✔	✔
Dilute	Diluent & sample are aspirated separately & dispensed together	✔	✔
Titrate	Partially dispenses under trigger control to desired endpoint	✔	✔
Manual	Measures unknown volumes; allows manual operation	Measures only	✔
GLP	Supplies operator log (cycles, date, technician ID)	–	✔
Speed	Up to 10 settings for each mode	✔	✔
Mix	Repeated movement of two samples in and out of tip	✔	✔
Sequence	spirate and/or dispense preset volumes in pipet, multidispense, and dilute modes	✔	✔
Cycle counter	Displays number of samples dispensed up to 999	–	✔
Sound	Tone signals when ready to aspirate and when sample is fully dispensed	✔	✔
Fixed pipetting	Aspirate and dispense up to 6 preset volumes	–	✔
Autopace	Automatic aliquot dispensing with adjustable time intervals between 0.2 and 25 seconds	–	✔
GENERAL INFORMATION			
Keyboard		Full numeric	4 keys
Number of volume settings		1000	1000
Automatic linearity correction		✔	✔
Interchangeable liquid ends		✔	–
Triggers		Single, finger-pull	Dual, thumb push
Fingerhook		–	✔
Battery included		✔	✔
Battery life before recharging (depends on usage & pipette volume)		1000 cycles	3000 cycles
Rapid charge stand		Optional	Optional***
Wall power supply		Included	Optional***
Operate with power cord		✔	✔

*** Either a Rapid Charge Stand or a Wall Power Supply is required to recharge the EDP3 Battery.

Laboratory solutions to advance your research

Analytical instruments from METTLER TOLEDO provide exact information about details on composition or properties of liquids or substances. Data generated can be analyzed and managed in customers' own information technology systems, using our application-specific software.

Simple, efficient and secure
The Titration Excellence line featuring the One Click™ Titration – a new milestone in solutions for simple, efficient and secure titration

Titration

Efficient
Determine water contents from 1ppm to 100% with the volumetric or coulometric Karl Fischer titrators. Either manual or automatic drying ovens release moisture of insoluble solid or viscous samples.

pH Measurement

Easily measurable
Based on electrochemical measuring technique, SevenEasy and SevenMulti are ingenious instruments for pH, conductivity and ion measurement.

Reliable
Reliability, performance and user-friendliness are the success factors of InLab® electrodes. Each electrode is individually tested and certified.

Density and Refractometry

Space saving
Our instruments with built-in thermostats allow rapid and highly accurate measurements without the need of a water bath. The combined DR meters offer both techniques in a single instrument. Optional are sample changers for highest productivity needs and for difficult or small samples.

METTLER TOLEDO is the perfect partner for weighing solutions in the lab – be it in research and development, production or quality control.

Precision Balances

Regulatory compliance
QM tools and color touchscreen operation make the XP the ideal balance for weighing in regulated environments.

Data integrity
LabX, the powerful PC software for instrument control and data management according to 21 CFR Part 11.

Moisture Analyzers

Traceable results
Halogen technology and automatic method development make the HR83 moisture analyzer the preferred choice in QC.

Micro Balances

Utmost accuracy
With a resolution of 0.1 microgram, the UMX microbalance ensures that even the smallest sample quantities are weighed 100% according to regulations.

Analytical Balances

Comprehensive security
Innovative solutions increase user safety and guarantee unprecedented sample yield and data security.

Service

Tailored services
Service XXL offers a full range of customer specific services including installation, calibration, preventative maintenance, repairs and training.

Procurement Programs

Partnership Program
RAININ's Partnership Program is a national accounts program for customers who adopt RAININ as a primary supplier for pipettes, tips, and service. Partnership customers receive:

- **Account review**
Your RAININ representative will review your account and propose a program tailored specifically to your needs. Periodic reviews help optimize your plan.

- **Lowest-cost solution**
RAININ's Program will help you achieve your lowest overall cost for pipetting-related products and services.

- **Free consultations**
RAININ experts provide advice regarding proper pipetting techniques and applications, calibration and preventive maintenance, and hand safety (ergonomics).

- **Other convenient e-commerce solutions**
EDI (Electronic Data Interchange), EFT (Electronic Fund Transfer), Bar Coding, American Express® PaymentLink, Electronic Catalog, and Intranet Support.

Stockroom Program
RAININ offers quantity discounts for pipettes and tip products to customers who stock RAININ products. Discounts are based on annual usage, with prices fixed for the calendar year. Promotional support, product samples and Sales Representative assistance are provided as part of the Stockroom Program.

New lab discounts
Call RAININ before you equip a new lab. Many product discounts are available exclusively through your RAININ Sales Representative.

Lab pricing agreements
Discounts are available for individual laboratories, based on estimated annual usage of tips, pipettes and service. Prices are fixed for the calendar year.

Call for information
To have a Sales Representative prepare a proposal tailored to your individual needs, call RAININ: 800-828-2788.

Technical References

These technical publications are provided to help you learn more about the importance of ergonomics and pipetting. Additional information is also available on the internet - www.rainin.com/pdf/lit.asp

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U.S. Patents

4,763,535; 4,905,526; 5,187,990; 5,364,596; 5,392,914; 5,441,702; 5,612,000; 5,614,153; 5,700,959; 5,779,984; 5,792,424; 5,849,248; 6,168,761 B1; 6,171,553 B1; 6,254,382 B1; 6,299,841 B1; 6,568,288; 6,737,023; 6,745,636; 6,967,044 B2; D437,940; D438,981; D426,643; D426,642

Other U.S. and national patents issued and pending.

www.rainin.com

For more information

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